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Meeting Montana's Economic Needs:

A Report on Montana Vocational Technical Education, Employment, and Training Programs and the Economic Needs of the State

Plus a Vo-Ed Analysis:

A Report on the Availability of Vocational Education Activities in Montana with Recommendations for Strengthening Vo-Ed

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November 1995

FOREWORD

The Council

The Montana Council on Vocational Education (Council) is a thirteen-member council appointed by the Governor. Membership is broadly representative of citizens and groups throughout Montana who have an interest in vocational technical education. Seven members represent the private sector interests of agriculture, business, industry, and labor and the council chair is selected from this membership. The other six members represent secondary and postsecondary vocational education, career guidance and counseling, and special populations.

The Council is established under Public Law 101-392, the Carl D. Perkins Vocational and Applied Technology Education Act of 1990. In accordance with the Act the Council is mandated to report and make recommendations to the Governor, the State Board of Regents, the Office of Public Instruction, the Board of Public Education, the business community, and general public of the State on matters relative to vocational technical education. The primary goal of MCVE is to assess, evaluate, and analyze the effectiveness of Montana's secondary and postsecondary vocational technical education delivery systems. In addition the Council evaluates and analyzes the adequacy, effectiveness, delivery, and coordination between vocational technical education and the job training programs, identifies employer training needs, and conducts public hearings, forums, conferences, and other related projects. Council activities are carried out in close coordination and cooperation with state and local vocational technical education organizations and agencies

Purpose of this Study

The study included in this report was undertaken to:

(1) Evaluate the extent to which vocational technical education, employment, and training programs in the State represent a consistent, integrated, and coordinated approach to meeting the economic needs of the State.

(2) Recommend policies the State should pursue to strengthen vocational education.

(3) Analyze and report on the availability of vocational education activities within the State.

How This Study Was Conducted

This study was conducted from May through November 1995 by Glen A. Thomas under a contract with the Montana Council on Vocational Education. The following procedures were utilized to gather information and data for this report:

(1) Materials from other states were requested and reviewed.

(2) Consultations were held and data was obtained from staff of the Governor's Office, the Office of the Superintendent of Public Instruction, the Office of the Commissioner of Higher Education, the Colleges of Technology, state and local Job Training Partnership Act officials, the Montana Department of Labor and Industry, the Montana Department of Commerce, economic development councils, the Montana Ambassadors, and private business and industry.

(3) A survey instrument related to the purpose of this study was devised and sent to appropriate institutions, schools and JTPA delivery systems. Survey results were compiled.

(4) Materials obtained from the above sources were examined, analyzed and summarized for applicable inclusion in this study.

(5) Conclusions, commendations and recommendations from the data were formulated and the results are reported on in this study.

Report Format

This report is divided into six parts. Chapter 1 briefly discusses the national scene in terms of economic needs and vocational education/job training program efforts to meet those needs. Montana's economy and economic needs are dealt with in Chapter 2. Chapter 3 addresses the extent to which vocational technical education, employment, and training programs meet Montana's economic needs. Chapter 4 examines the availability of vocational education activities in the state. Chapter 5 looks at options for strengthening vocational education. The final chapter contains recommendations drawn from the previous chapters and from overall study parameters.

Special Thanks

Special thanks is extended to all individuals and groups who have provided information for this report through surveys, interviews, and personal requests.

Table of Contents

The Montana Council on Vocational Education 1995-1996

Foreword I

1 The National Scene -- Meeting the Needs **1**
The Information Era 1
Workers -- Increasing Skills Needed 2
Vo-Ed and Job Training Programs -- Keys in Economic Development 2
The Challenge 2
A Sampling of States -- What is Happening 3
Oregon 3
Wisconsin 3
Illinois 3
Wyoming 4
Ohio 4
Minnesota 4
Missouri 4

2 Montana -- Its Economy and Economic Needs **5**
The Treasure State -- An Economic Overview 5
The Average Montana Worker -- 1995 6
Montana Employment Changes 1964-1994 7
Major MT Nonagricultural Jobs -- 1994 8
Other MT Nonagricultural Jobs -- 1994 9
Montana's Growing Occupations 10
Economic Development in Montana Today 11
The Governor's Office 11
The Montana Department of Commerce 11
The Montana Department of Labor and Industry 12
The Montana Ambassadors 13
Local Entities 13
The Montana Economic Developers Association 13

3 Meeting the Economic Needs: Vo-ed and Training Programs Reviewed ... **15**
The Task 15
Gathering Information for this Report 15
MCVE Surveys 16
MCVE Survey Findings 16
The Role of Vo-Ed and JTPA in MT Economic Development 16
How Can Vo-Ed and JTPA Better Serve Employment and Training Needs? .. 17

How Can Programs Contribute More Effectively to Economic Development? . 17
Suggestions for Strengthening the Role and Function of JTPA in Worker Training and Economic Development . . . 18
Barriers to Providing Training to Meet Employer Needs . . . 18
Involvement of Employers in the Design, Development, and Implementation of Programs . . . 19
Program Planning Sources . . . 20
Additional Resources Needed by Vo-ed and JTPA to Better Serve Employer Needs . . . 21
Impact of Programs on MT Economic Development . . . 21
Suggestions for Improving Economic Development in Montana . . . 22
Rating the Consistency, Integration & Coordination of Programs to Meet the Economic Needs of MT . . . 24
Previous MCVE Study Findings Relevant to Meeting Economic Needs . . . 25
March 1995 MCVE Study . . . 25
Survey of Vocational Technical and Job Training Service Providers . . . 26
EQW National Employer Survey 1994 . . . 27
Some Findings Related to this Study . . . 27
Important Hiring Factors . . . 27
The Bragg/Lewis Business Retention and Expansion Project . . . 28
Bragg/Lewis Findings Related to Education and Training . . . 28
Concerns Expressed About Education and Training in Montana by MEDA . . . 29
The Montana Economic Developers Association . . . 29
MEDA Concerns . . . 29
Customized Training is Offered . . . 30
New Directions for the Colleges of Technology . . . 30
Customized Training Opportunities for Business in Great Falls . . . 30
Efforts to Speed Up Program Adoption . . . 31

4 Availability of Vo-Ed Activities in Montana . . . 33
Vocational-Technical Education in MT -- A Vast Entity . . . 33
Vo-Ed Administration in Montana . . . 33
Secondary Schools . . . 33
Postsecondary Institutions . . . 33
Strategies for Delivering Vocational Education in Montana . . . 35
In-School Vocational Instruction . . . 35
Extended Campus . . . 35
Cooperative Vocational Education . . . 35
School-to-Work . . . 35
Tech Prep . . . 36
Vocational Student Organizations . . . 36
Distance Learning . . . 37
Current Activities . . . 38
Restructuring of the Montana University System -- Phase 2 . . . 38
School-to-Work . . . 39
Tech Prep Availability to Secondary Schools . . . 40
Secondary School Vo-Ed Program Statistics . . . 41

1995-1996 Approved MT Vocational Programs 41
Secondary School Availability/Limitations 42
Postsecondary Program Information 43
Postsecondary Vocational-Technical Education Program Offerings in Montana 43
Postsecondary Technical Programs in MT 1995-1996 44
Postsecondary Program Offerings vs. Needs 47
New Program Possibilities 48
Barriers to Postsecondary Availability 48
1995 Study on Two-Year Postsecondary Education in Montana by the Legislative Fiscal Analyst's Office 49

5 Strengthening Vocational Education 51
The Winds of Change 51
Secondary Vocational Education 52
MCVE Survey Suggestions for Strengthening High School Vocational Education 52
Postsecondary Vocational-Technical Education 54
MCVE Survey Suggestions for Strengthening Postsecondary Vocational-Technical Education 54

6 Summary and Recommendations 57
Summary 57
Recommendations 58

Appendix 61
Appendix A Survey of Secondary Vocational Programs 61
Appendix B Survey of Postsecondary Vocational Programs 64
Appendix C Survey of Job Partnership Act Delivery Systems 67

References 71

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1

The National Scene -- Meeting the Needs

The Information Era

Advancements in technology have led to today's knowledge-intensive economy in which information is central. Computers and telecommunications are the focal points for shaping this new economy. Those who know how to deploy and utilize the new technology have a distinct advantage for the future.

In *The Next American Frontier*, current U.S. Secretary of Labor Robert Reich declares that the competitive edge among the developed economies will go to the makers of precision products that are customized and technology-driven, those that can be made by highly-skilled labor and advanced technology. All facets of the production process -- development, design, manufacturing, marketing, and distribution -- are merged. Workers must be highly-skilled and capable of understanding all aspects of the production process in order to effect continuous improvements in both process and product. This represents a totally-reformed industrial climate.

As the economy evolves, changes also occur in all aspects of culture. Differences in values, lifestyles, corporate structures, institutions, and politics happen as a result of the technology explosion.

Business, government, labor, and education face new challenges and must work together if there is to be a productive setting for growth and prosperity. New roles for education and training have emerged as the new economy takes shape. Rapidly changing skills require lifelong learning opportunities for the workforce.

It is with this backdrop that the various states endeavor to adjust and react to the needs of the future. A key to this effort is the vocational education and job training community. Its response is crucial not only to economic development within their respective states, but also to its survival as a viable part of the economic promenade.

Workers -- Increasing Skills Needed

A competent, qualified American workforce is pivotal to successful economic growth. A 1994 study by The National Center on the Educational Quality of the Workforce administered by the Bureau of the Census found that 56 percent of the establishments surveyed reported that worker skill requirements are increasing. Virtually all establishments provide some kind of formal or informal training to assist employees with skill-upgrading. A significant finding, however, was that 20 percent of workers lacked the necessary skills to do their current job.

Vo-Ed and Job Training Programs -- Keys in Economic Development

Education and job training are key components in economic development. While there are other aspects to workforce preparation, this report essentially discusses two major areas -- vocational-technical education and Job Partnership Training Act (JPTA) programs.

The role of vocational-technical education and job training programs is to prepare people to enter and perform successfully in the world of work. Vocational education targets students in schools -- secondary and postsecondary -- and experiences range from very general to very specific. Vocational education programs vary from those designed to help students learn basic skills needed in almost any occupation to particular programs that train students for particular jobs with particular employers. Federal and state job training programs prepare youth and unskilled adults for entry into the labor force and provide job training for economically disadvantaged individuals, displaced workers, and others facing serious barriers to employment.

The Challenge

Vocational education and job training programs have always had an enormous challenge. As we approach the twenty-first century, it is even more imposing. Providing the know-how and framework for people to move successfully and constructively from school or training to work in the face of today's technological whirlwind is no small responsibility. Doing this while meeting economic needs of the region, state, or locality is a mission of mammoth proportions and consequence.

A Sampling of States -- What is Happening

Oregon

Oregon has legislated several education and employment training changes designed to better meet the economic needs of the state. This reform is based on the assumptions that: a) Oregon cannot continue to under-educate students and train workers for low-skill jobs that pay low wages; b) Oregon must influence businesses to create high-skill jobs which pay adequate household wages; and c) Oregon must recognize that changes in both social and economic policy are crucial for a high-skill, high-wage economy.

Partnerships among business, labor, and educators to develop standards for academic professional technical endorsements and the provision of on-the-job training and apprenticeships necessary to achieve those standards have been developed. School districts may redesign how they deliver education and generate new programs to respond to emerging needs. By the 1997-1998 school year, a certificate of Initial Mastery will be required for enrollment in any public education program that leads students to further certification or education.

Wisconsin

In 1991 Wisconsin enacted a reform effort called the School-to-Work Initiative (WSWI). The initiative encompasses a variety of elements, including an assessment examination, Tech Prep, postsecondary enrollment options, youth apprenticeship, and child labor laws. The WSWI makes school districts responsible for developing Tech Prep programs in each high school. These programs combine applied academics with specific skill training to help students prepare for their future and offer advanced academic standing to high school graduates who pursue further education in state technical colleges.

Illinois

Illinois is in the midst of reform efforts due to common concerns that have surfaced nationwide. Employers complained that they could not find enough qualified people to fill vacancies in the workforce. In-house training was increased but there still was a problem finding people who had the basic academic foundation. Vocational education, which had long been criticized for too much "job specific" training, was being told it wasn't even doing *that* well. Educators recognized that the problem was one of quality, not quantity. A number of initiatives are emerging that will benefit vocational education and job training programs. Education and JTPA, who have competed more like adversaries than associates, appear to be involved in a healing process to work for the common good.

Wyoming

Wyoming is discussing a reform effort to restructure education and job training so that they are more responsive to the changing world, business markets, and the Wyoming workplace. This reform involves modifying traditional teaching methods and beliefs to help children and adults get and keep jobs. JTPA has a strong program but more formal and regular contact with the State Board of Education is being urged.

Ohio

Ohio had the largest enrollment in the nation in career education during 1994 with 1.7 million students receiving occupational information. Almost 300,000 secondary students were enrolled in vocational education programs. More than 100,000 students were enrolled in vocational-technical programs in Ohio's two-year postsecondary institutions. Adult education served nearly a quarter million people. JTPA has an especially close relationship with the vocational education system. A greater focus has been on participants with barriers to employment and services have been strengthened for preparing youth for the labor force.

Several products and processes have evolved from implementation of "Ohio's Future at Work" programs. These initiatives include: 1) identifying the competencies prospective employees need; 2) having those competencies verified; 3) translating those competencies into a performance-based curriculum; 4) linking staff development to the validated lists of competencies; 5) communicating with vocational education students; and 6) developing relevant assessment procedures and instruments.

Minnesota

A Minnesota task force on education and employment transitions has proposed a strategic approach to education and employment transitions for people of all ages and heritages. This is a result of difficulty by more than half of Minnesota businesses in recruiting skilled and technical workers. A clear majority of Minnesota businesses support increased public investments to meet the economic needs. Under state policy directives, education, business, and labor collaboratively are establishing world class performance standards for the development of such an education and employment transitions system.

Missouri

Missouri reports that too few new high-tech programs are being implemented. The equipment in Missouri vo-ed programs has become outdated. Funding sources must be found to update equipment. More coordination is needed for Missouri's job training programs.

2

Montana -- Its Economy and Economic Needs

The Treasure State -- An Economic Overview

Montana is a truly diverse state. Montana's size alone, measuring 570 miles by 315 miles at its extremes, is testament to this as it provides the opportunity for a person to experience a multitude of terrains without ever crossing the state line.

The Treasure State's population is on the rise, having increased by more than 56,000 since 1990. Thirty-nine of the state's 56 counties have experienced growth in that time. The actual center of population has shifted from the Great Falls area to the boundary between Lewis & Clark and Meagher counties to the south and west.

Montana's economy has traditionally depended on natural resource-linked industries. The open plains of Central and Eastern Montana provide land for grain farming, grazing for large herds of beef cattle, oil and gas fields, and rich coal deposits. The mountainous regions of Western Montana yield timber for wood products manufacturing and minerals for mining. Recent years, however, have seen the state relying less on its natural resources, and branching out into a more diversified economy. According to the Montana Department of Labor and Industry, many more service-producing jobs (transportation, utilities, wholesale/retail trade, finance, insurance, real estate, business, professional, and other personal services) are being added than are goods-producing jobs. The chart on page 6 shows the changes in Montana employment from 1964 to 1994. Major nonagricultural employment clusters are shown on pages 7 and 8 -- the three largest being services, retail trade, and government. Montana's growing occupations from 1990-1997, as projected by the Montana Department of Labor and Industry, are shown on page 9.

Part of the decline in goods-producing jobs is attributable to the increased application of mechanization and technology. For example, in 1940 agricultural employment in Montana comprised about one-third of all Montana's workers. By 1960, the percentage was 17% and

by 1994, it was less than half of that. Agriculture's overall role has diminished but its production has reached record numbers.

Small business plays a significant role in Montana's economy. Recent employment data shows that about 38 percent of the state's wage and salary jobs are with firms that employ fewer than 20 people -- and about 73 percent are with businesses employing fewer than 100 people.

Montana's workforce has become more educated over time. In 1960, approximately 35% of the workers had an eighth grade education or less and 8% had four or more years of college. In 1990, 8% of the workforce had an eighth grade education or less and 20% had four or more years of college. During that same period high school diplomas went from 48% to 81%. From 1960 to 1994 the gender of Montana's workers has gone from 30% female to 45% female.

The unemployment rate in Montana has historically reflected the ups and downs of both the nation's and the state's economy. For example, from 1985 through 1991 the unemployment rate in Montana exceeded the national average. Since 1991 Montana's rate of unemployment has been below the national average, having declined to 5.1 percent for 1994.

According to a nationwide economic report card by the Corporation for Enterprise Development, Montana's 1994 economy, which saw one to two new private sector jobs created every hour, placed among the nation's top five states in terms of economic development, business vitality, and development capacity.

The data and charts that follow depict Montana employee/employment information. Their significance will be discussed later in this report.

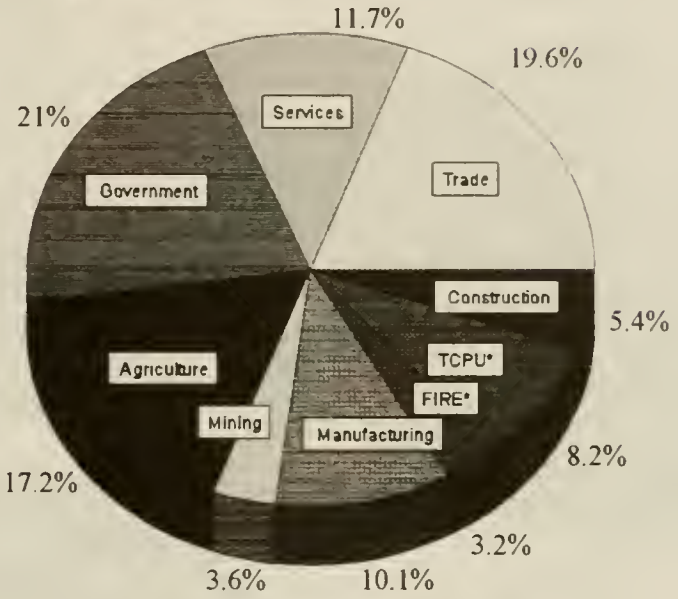
The Average Montana Worker -- 1995

According to a report issued for Labor Day 1995 by the Montana Department of Labor and Industry, the average Montana worker:

- Is 35-44 years old.
- Has a high school diploma or equivalent and may have post-high school education or training.
- Is a full-time employee of a private-for-profit company.
- Works in the services or trade sector.
- Is employed in a service or administrative support occupation.
- Earns $20,111 per year ($9.72 per hour).
- Is married with a working spouse and one child residing at home.
- Lives within 15 minutes of the workplace and does not car pool or take public transportation.

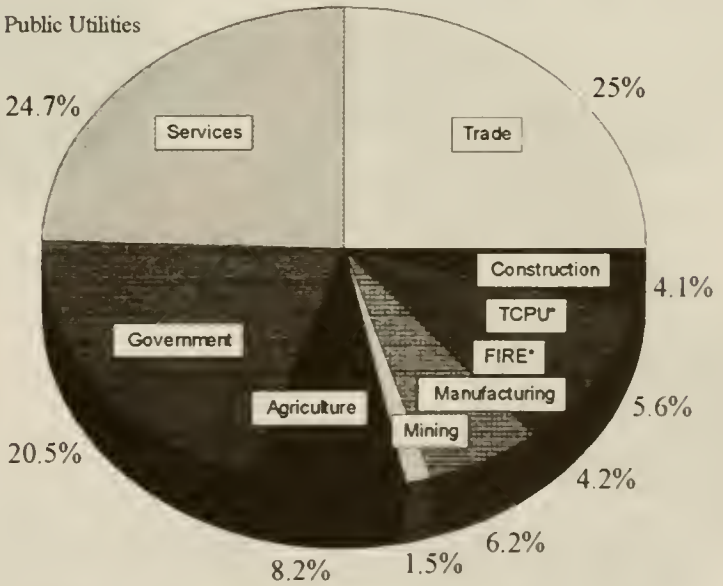
Montana Employment Changes 1964-1994

1964 Makeup of MT Workforce



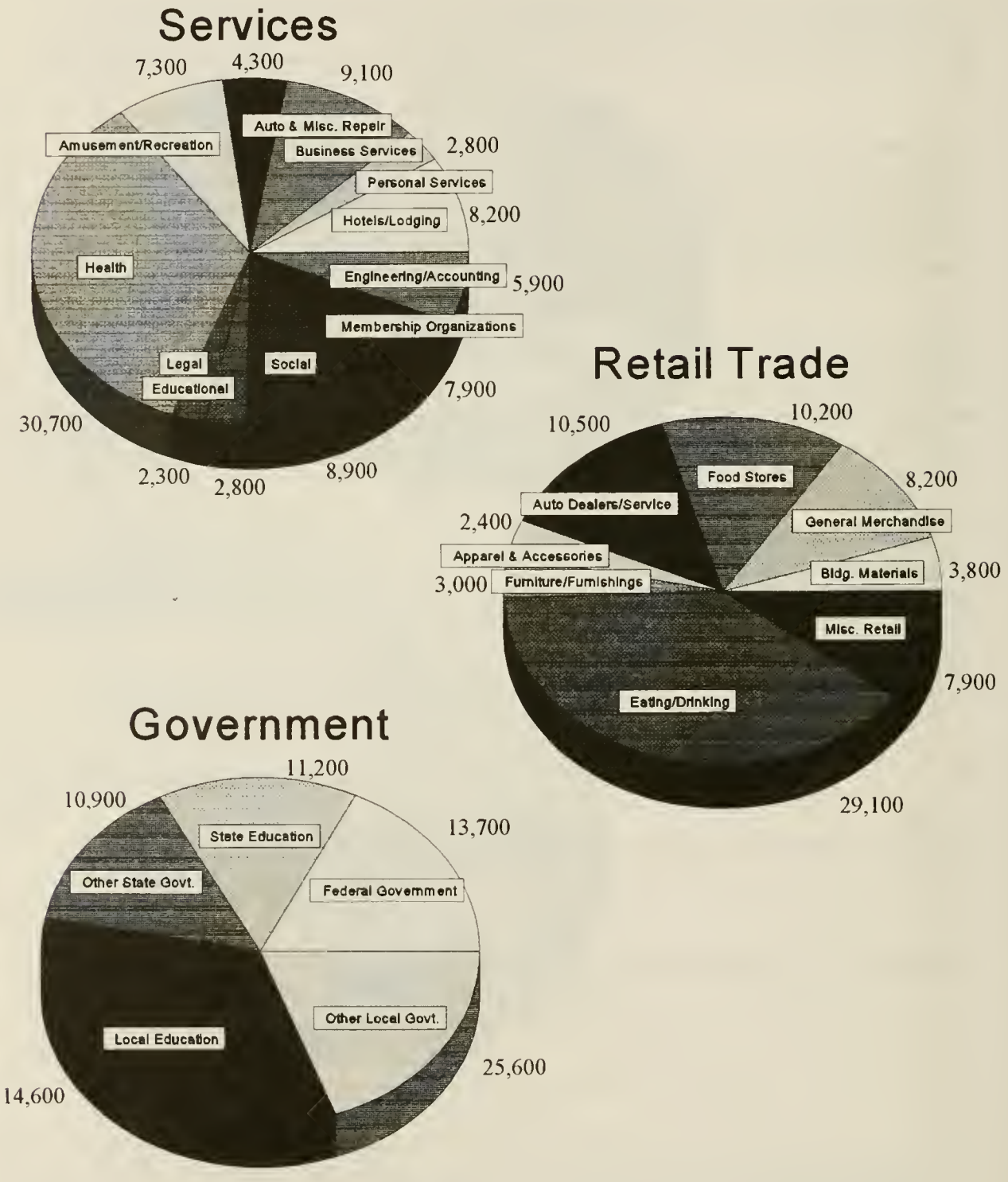
1994 Makeup of MT Workforce

*Transportation, Communication & Public Utilities
*Finance, Insurance & Real Estate



Source: MT Department of Labor & Industry, Research & Analysis Bureau 1995

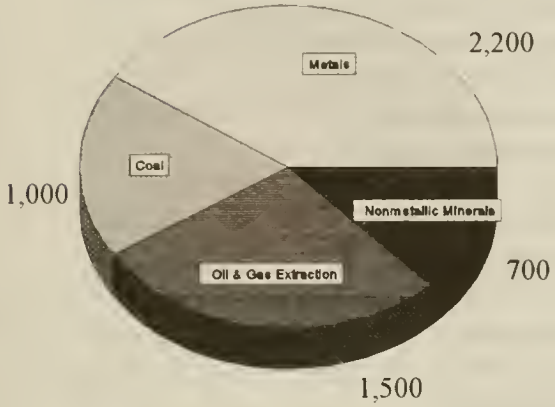
Major MT Nonagricultural Jobs -- 1994



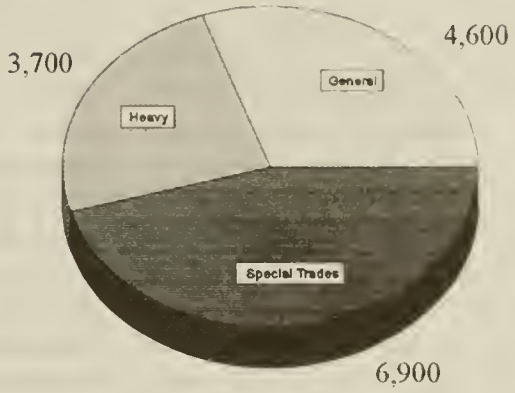
Source: MT Dept. Of Labor & Industry, Research & Analysis Bureau 1995

Other MT Nonagricultural Jobs -- 1994

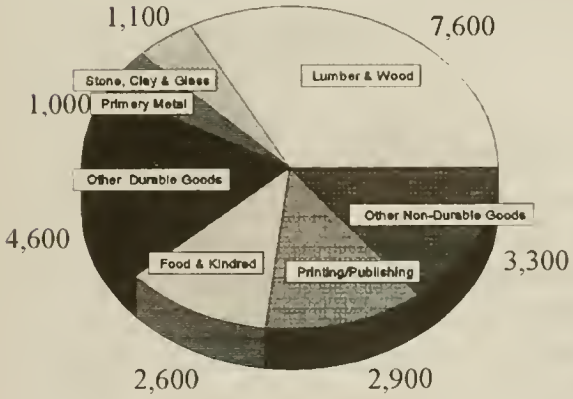
Mining



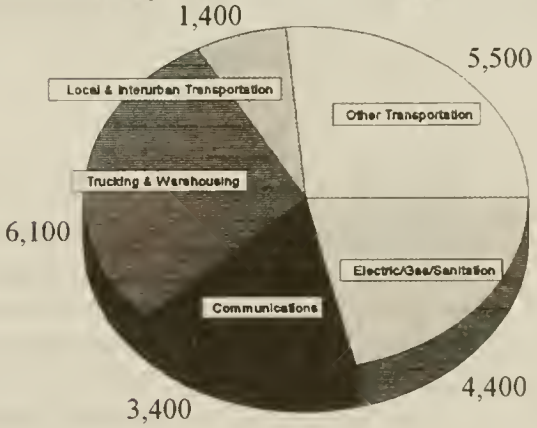
Contract Construction



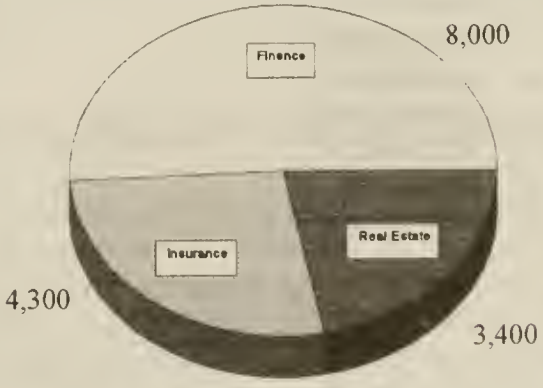
Manufacturing



Transportation/Communication/Utilities

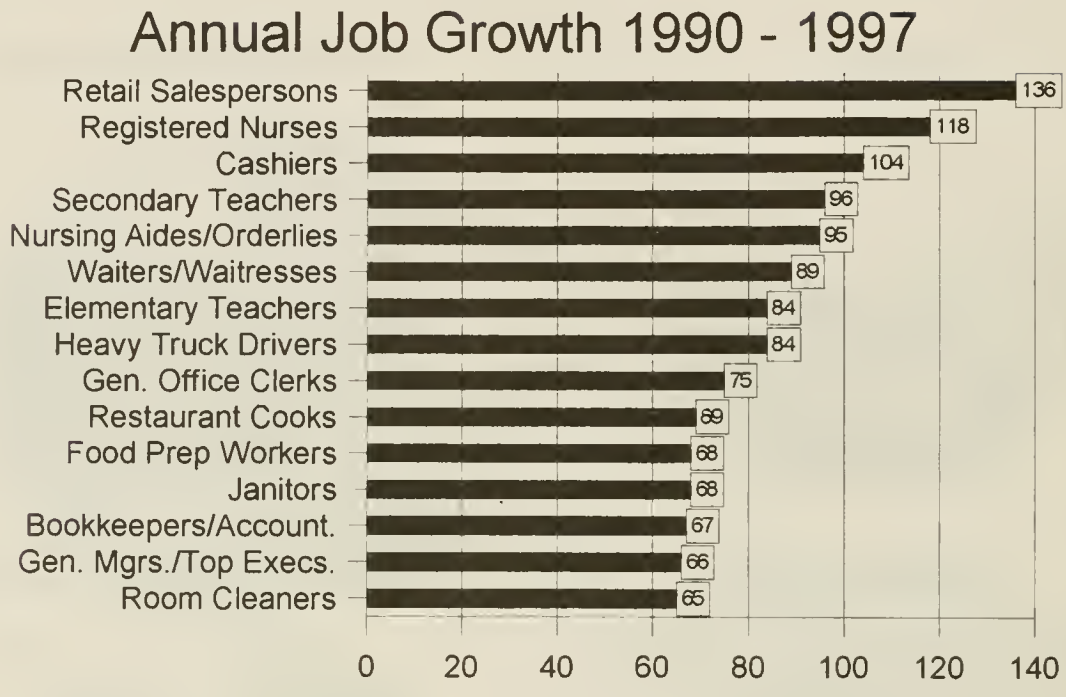


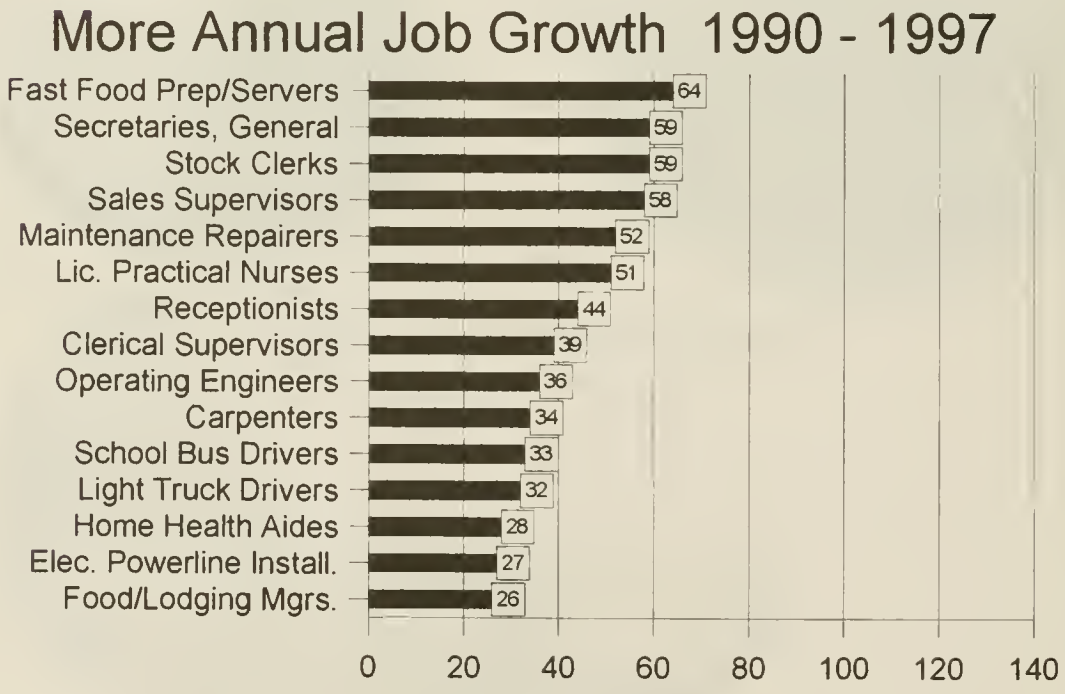
Finance/Insurance/Real Estate



Source: MT Dept. of Labor & Industry, Research & Analysis Bureau 1995

Montana's Growing Occupations





Source: Montana Department of Labor & Industry, Research & Analysis Bureau 1992

Economic Development in Montana Today

Currently Montana has no official economic development plan. This in no way means that economic development is not occurring in Montana (because there is considerable work being done in this arena), but there is no long-range blueprint to enable vocational education and job training to provide appropriate programs to further the goals of the plan. Several attempts at bringing about such a plan have been made, but as yet there is no common agreement on how best to proceed.

The Montana Futures Project, which was completed in 1993, was an extensive effort to develop a plan and agenda to guide the state's economic future over the next twenty years. The process involved statewide public participation culminating in the development of a statewide vision for Montana's future, goals for reaching that vision, and benchmarks to act as guideposts to measure progress in achievement. To date the Futures Project has not been enacted, nor has any other plan taken its place. Some features of the project and other economic development activities, however, are being accomplished by several entities -- both public and private -- independent of any single overall, coordinated strategy. Major players are the Montana Department of Commerce, the Governor's Office, local development boards and councils, chambers, businesses, labor organizations, job training programs, and educational institutions.

The Governor's Office

In 1994 Governor Marc Racicot created an economic development policy advisor position on his staff and appointed an individual from the business community to the post. This advisor works closely with the Department of Commerce, state and local government agencies, business and other entities (including education and job training) to provide liaison and direction to administration efforts at addressing economic development issues. The Governor's economic policy advisor coordinated the Bragg/Lewis Business Retention and Expansion Project, an important 1995 study conducted by the Montana Ambassadors utilized in this MCVE report.

The Montana Department of Commerce

The Montana Department of Commerce was created in 1981 to support the development of Montana's economy by providing financial and technical assistance to the state's small business community and local economic development organizations. The Economic Development Division (EDD) of the Department of Commerce consists of a variety of programs aimed at improving and enhancing Montana's economic and business climate. The EDD assists start-up and existing businesses with the technical and financial assistance. Under the Regional Development program, Montana is divided into five regions with a

Regional Development Officer assigned to each area. These officers travel throughout their regions, maintaining contact with local leaders, and development organizations, chambers, businesses, and other entities to assist in development of local economies. Businesses receive individual consulting and group training about business operating procedures and finances.

The Economic Development Division of the Montana Department of Commerce has a trade program which pursues opportunities for increased trade -- both worldwide and domestically. Export assistance, tourist promotion, and the Made in Montana program are among the many components of this program. Among several other Department of Commerce programs which foster economic development are the Small Business Development Center Program, the Micro Business Finance Program, and the Business Recruitment Program.

The Business Recruitment Program (BRP) represents Montana to firms planning relocations or expansions in the state. The BRP develops relations with target businesses and provides assistance on communities, sites, facilities, incentives, and any other information a business might need to locate in Montana. The Business Recruitment Program also works closely with local development organizations in their efforts to recruit new business to their communities. An example of this coordinated effort occurred during the Micron Technology and Luigino's recruitment ventures in Butte during 1994 and 1995. The Montana Department of Commerce Business Recruitment Program and Butte Local Development Corporation officials, as did many others, worked cooperatively and effectively to bring about a successful bid from Luigino's. Unfortunately, the project was terminated late in 1995.

The Montana Department of Labor and Industry

The Montana Department of Labor and Industry is charged with promoting the well-being and opportunities of Montana's workers and employers, and upholding the rights and responsibilities of both. The department provides oversight and regulation of the Montana workers compensation system, enforces state and federal labor standards, enforces state and federal safety-occupational health law, and provides adjudicative services in labor-management disputes. Extremely important functions of the department related to economic planning and development are conducting research and collecting employment statistics that enable strategic planning.

The department also operates as part of a national employment, unemployment insurance, and job training system that assists individuals in finding jobs, assists employers in finding workers, and helps workers obtain unemployment benefits.

The State Job Training Bureau administers training opportunities for dislocated workers to re-enter the labor force and for economically disadvantaged people with barriers to successful employment. Federally funded programs the bureau governs include the Job Training Partnership Act (JTPA) and the Economic Dislocation and Worker Adjustment Act (EDWAA). State-funded programs include the State Dislocated Worker Program, the

Displaced Homemaker Program, the Custodial Parent Program, and the Job Training for Offenders Program.

The Montana Ambassadors

The Montana Ambassadors is a private sector, business-related organization which works cooperatively with state government on matters of business location, retention, marketing, and Montana promotion. The Ambassadors include approximately 160 business and education leaders from throughout the state who, for example, assist the Department of Commerce and Governor's Office in business recruitment projects, help Montana manufacturers market products outside the state, and host foreign visitors and trade delegations.

Local Entities

In addition to the above-mentioned agencies and organizations, there are numerous local entities involved in economic development. These include local government, chambers of commerce, local business organizations, and local economic development corporations, as well as educational and job training programs. All of these groups have the ability to work and plan cooperative ventures.

The Montana Economic Developers Association

The Montana Economic Developers Association, described in more detail later in this report, is a statewide association which brings together all parties who share a common interest in economic development.

3

Meeting the Economic Needs: Vo-ed and Training Programs Reviewed

The Task

The sources and types of programs which prepare people to enter and perform successfully in the world of work are staggering. In addition to the public and non-public school system, programs are provided by the military, non-public vocational schools operating on a profit or not-for-profit basis, unions, business and industry, governmental agencies, and community groups. Appraising the performance of all these entities is well beyond the scope of this report, but it should be understood that there are many players in the arena of preparation for employment.

Assessing the degree to which vocational technical and job training programs meet the economic needs of the state is a difficult undertaking in Montana. This is partly due to the fact that Montana does not have an official economic development plan. Measuring against a particular benchmark that the state has set cannot be done. Yet, it is possible to report perspectives and relevant data from those who participate in the economic arena.

Gathering Information for this Report

Information and data related to how education and job training are meeting perceived Montana economic needs was gathered from a variety of sources for this study. Numerous individuals, both from the public and the private sector, were visited or interviewed to obtain information and perspectives. A survey was undertaken through the auspices of the Montana Council on Vocational Education to secure data and commentary from secondary, postsecondary, and job training personnel and advisory council members. The Bragg/Lewis business survey conducted by the Montana Ambassadors was utilized, as was a study by the Legislative Fiscal Analyst's Office. Several conferences and meetings on economic development, education or training were attended by the writer of this report to gather information.

MCVE Surveys

Surveys were utilized by the Council in fulfilling its mandate to evaluate the extent to which vocational technical, employment, and training programs in Montana represent a consistent, integrated, and coordinated approach to meeting the economic needs of the state. The survey instruments were developed by MCVE in cooperation with staffs from the Office of the Commissioner of Higher Education, the Office of Public Instruction, the Department of Labor and Industry, and Montana Job Training Partnership, Inc. Three surveys were developed. These were directed at postsecondary vocational technical institutions, secondary vocational programs, and Job Training Partnership Act Delivery Systems. These survey forms can be found in the Appendix of this report.

Surveys were mailed on May 4, 1995 with a June 1 return date. The postsecondary form was sent to deans and instructors at all Montana colleges of technology and community colleges as well as vocational technical programs at Montana State University -- Northern and Western Montana College of The University of Montana. The secondary surveys were sent to high school vocational teachers throughout Montana, equally representing all vocational programs. Surveys were also sent to OPI vocational staff members. JTPA surveys were sent to selected program operators, administrators, Job Service personnel, and council members. The survey return was 93.3% for postsecondary, 47.2% for secondary, and 20.5% for JTPA. The following table gives overall statistics related to surveys sent and received.

MCVE Survey Distribution/Return

Entity	Number Sent	Number Returned	% Returned
Postsecondary	15	14	93.3%
Secondary	53	25	47.2%
JTPA	127	26	20.5%
Total	195	65	33.3%

MCVE Survey Findings

The Role of Vo-Ed and JTPA in MT Economic Development

For this study *economic development* was defined as *the development of human, natural, and industrial resources which contribute to social and economic prosperity.* When asked what the *role of postsecondary vocational technical education is in the economic*

development of Montana, 91% of the postsecondary personnel responding to this question indicated that the role was related to meeting training needs or providing re-training or customized training for industry. Ninety-six percent of the high school vocational educators who participated in the survey indicated that the role of vocational education in economic development was *to help make the transition from school to work easier.*

The response to a similar question on the JTPA questionnaire regarding the role of JTPA in economic development in Montana was more varied. *Meeting employer needs* was the most frequent response (38%), while 30% of those returning the JTPA survey felt that *preparing unskilled workers to enter the workforce* was the primary role.

Overall, *meeting employment demands* is a key component of the role of education and training programs in economic development as viewed by persons responding to the survey from these entities. Preparing individuals to perform successfully in the workforce while meeting employment demands is also important to survey participants.

How Can Vo-Ed and JTPA Better Serve Employment and Training Needs?

Survey participants were asked "How can employment and training needs in Montana be better served?" Seventy-one percent of postsecondary educators answering this question felt that *being responsive and flexible* or *developing more specialized training at the request of industry* was important to better attend to Montana's needs. High school educators (50%) felt that *implementing more School-to-Work programs* is the top priority in better serving the needs.

How Can Programs Contribute More Effectively to Economic Development?

When asked the question: "How can programs contribute more effectively to economic development?" the most frequent response (75%) of postsecondary survey participants was related to *being responsive to training needs*. Suggestions included educating people to be entrepreneurs in order to generate new business, developing national and international business partnerships, and creating Business Outreach Centers.

Secondary vocational educators responding to the same question most frequently indicated (36%) that the way this should be done was *making sure programs meet employer needs while maximizing student potential.* Other responses included *keeping programs up to date* (14%), *developing good work ethic among students* (14%), and *making sure that students graduate from high school with solid basic skills and salable work skills* (14%).

Suggestions for Strengthening the Role and Function of JTPA in Worker Training and Economic Development

Fifty-two percent of JTPA responses to the questionnaire indicated that *more adequate funding* was the most critical factor in strengthening the role and function of JTPA in worker training and economic development. *More coordination between training and business* was the response of 16%. *Better coordination of programs* was cited by another 8% of JTPA survey respondents.

Barriers to Providing Training to Meet Employer Needs

All three entities (postsecondary vo-ed, secondary vo-ed, and JTPA) were asked to react to the question *"What barriers have you experienced in providing training to meet employer needs?"*

Thirty-two percent of the postsecondary responses to this question indicated that *funding* was the largest barrier. Another 14% of the replies cited *lack of staff* as a barrier. *Bureaucratic slowness in responding to needs* was cited in 21% of the answers. *Outdated or insufficient equipment* was mentioned in 18% of the responses, while *lack of facilities* was a concern of 7% of postsecondary survey completers.

Inadequate funding was a barrier listed in 17% of the secondary school surveys. *Outdated or lack of equipment* was mentioned in 12% of the responses. Eight percent of the replies indicated *negative student attitudes* as a problem, while another 7% listed *vocational education's image* as a hindrance. *A college-oriented curriculum* was listed as a hurdle in 10% of the replies. *Counselors and administrators who do not give vocational education sufficient support* was given as an obstacle in 7% of survey responses to this question.

JTPA respondents also felt that *funding* was a primary barrier, as cited in 19% of the replies. *Bureaucracy* was mentioned as an impediment in 16% of the responses. Other obstacles listed were *worker personal problems* (13%), *inadequate wages* (10%), *employer awareness* (6%), *job shortages and opportunities* (6%), and *the need for long-term training* (6%).

Involvement of Employers in the Design, Development, and Implementation of Programs

Postsecondary and secondary educators were asked to list strategies utilized to involve employers in the design, development, and implementation of programs at their institution. Results are shown in the table that follows. Responses are the number of times that the strategy was checked by the various schools as a method being utilized.

Strategies to Involve Employers in Vo-Ed Program Design		
Strategy	**No. Post-Sec Responses**	**No. Secondary Responses**
Advisory councils	14	24
Equipment donations from business	12	13
Customized training for business	12	2
Tech Prep	12	13
Student internships/exploration	10	15
Business tours	9	21
Co-op work programs	9	17
School-business partnerships	8	9
On-the-job training (postsecondary)	7	-
School-to-Work (secondary)	-	7
Other	3	5

JTPA survey participants were also asked to identify strategies utilized in the design, development, or implementation of their programs. The following table shows JTPA responses to this request.

JTPA Strategies to Involve Employers in Program Design			
Strategy	**No. of responses**	**Strategy**	**No. of responses**
Communication with employers	11	Work experience	2
Job Service Employer Committees	11	Mentors	1
Needs assessments/surveys	6	No strategy utilized	2

Program Planning Sources

For program planning or curriculum modification, postsecondary, secondary, and JTPA survey participants were asked to indicate the sources they rely upon to obtain information on economic, employment, and training needs in Montana. The table that follows indicates the number of times each source was reported as being useful for program development by survey respondents.

Sources of Planning Information				
Source	**No. of Post-Secondary Responses**	**No. of Secondary Responses**	**No. of JTPA Responses**	**Total No. of Responses**
MT Department of Labor statistics	9	13	20	42
Needs assessments	8	8	8	24
US Department of Labor statistics	7	9	6	22
MT Department of Commerce statistics	2	2	5	9
Economic development councils/boards	4	8	11	23
Chamber of Commerce information	4	5	14	23
Local businesses	6	19	20	45
Other	5	7	10	22

Totals indicate that the most frequently utilized sources are local businesses and Montana Department of Labor statistics. This seems appropriate for serving the demands of the local area as well as the needs of the state. Other program planning sources included newspapers, trade journals, the Job Service, the Montana Career Information System, and local labor market information.

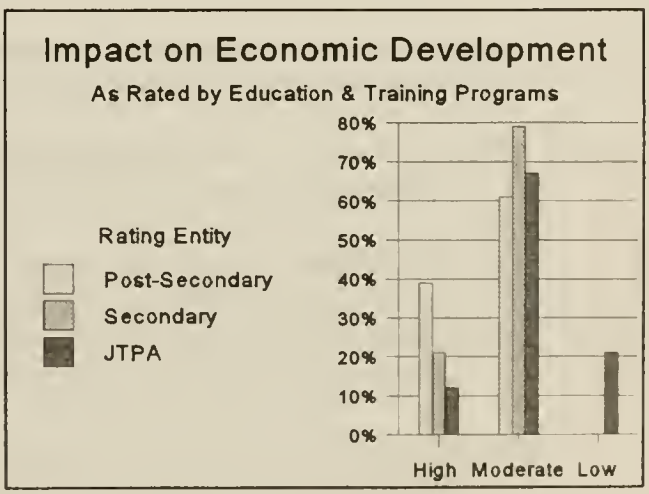
Additional Resources Needed by Vo-ed and JTPA to Better Serve Employer Needs

Survey participants were asked to list the resources which would help their institution, school, or delivery system better meet Montana employer needs. Their responses are shown in the ensuing table. Each total indicates the number of times the respective reply was given by those answering this survey question.

Resources Needed by Vo-Ed and JTPA to Better Serve Employer Needs				
Resources	**No. of Post-Secondary Responses**	**No. of Secondary Responses**	**No. of JTPA Responses**	**Total No. of Responses**
Additional facilities	13	7	14	34
Availability of data regarding worker supply and demand	8	13	2	23
Increased or better communication among private and governmental entities	7	11	13	31
Additional funding	14	18	21	53
Short and long-range plans developed by education, business, industry, labor & local/state govt.	10	17	18	45
Other	2	2	7	11

Impact of Programs on MT Economic Development

All three surveys requested responders to rate the impact of their programs on Montana's economic development over the last five years. The table at the right shows how the different entities rated that impact. Postsecondary institutions felt that they had the highest influence on economic development (39% high, 61% moderate), while JTPA felt it had the lowest (12% high, 67% moderate, 21% low). Secondary schools rated 21% high and 79% moderate impact.



Suggestions for Improving Economic Development in Montana

Survey participants were asked to suggest policies or initiatives that would improve economic development in Montana. Numerous suggestions were received from those responding to the MCVE survey. Representative comments are given below.

Postsecondary Comments on Improving Economic Development in Montana

- Continued monitoring of business needs is very important.
- The leadership at the state level should be centralized.
- An integrated and coordinated approach is needed.
- Two-year institutions should be promoted and organized to be Montana's primary source for small business training.
- The State Department of Commerce should establish economic development goals by regions and design strategies that directly and concretely involve two-year institutions.
- A stronger commitment to education in general is needed.
- Incentives for business participation in the educational/training process should be established.
- Montana needs a clearly defined economic plan.

Secondary School Comments on Improving Economic Development in Montana

- The tax structure should be changed, especially the property tax. Workers Compensation needs to be fixed.
- The legislature must put more value on the economic impact that education has in this state. The youth in Montana are the most valuable resource the state has. Montana must invest more in the education of its students and provide more opportunities for them to stay in Montana and be productive citizens.
- Education and business need to partner and work much closer together so that each understands the expectations and realities of the other.

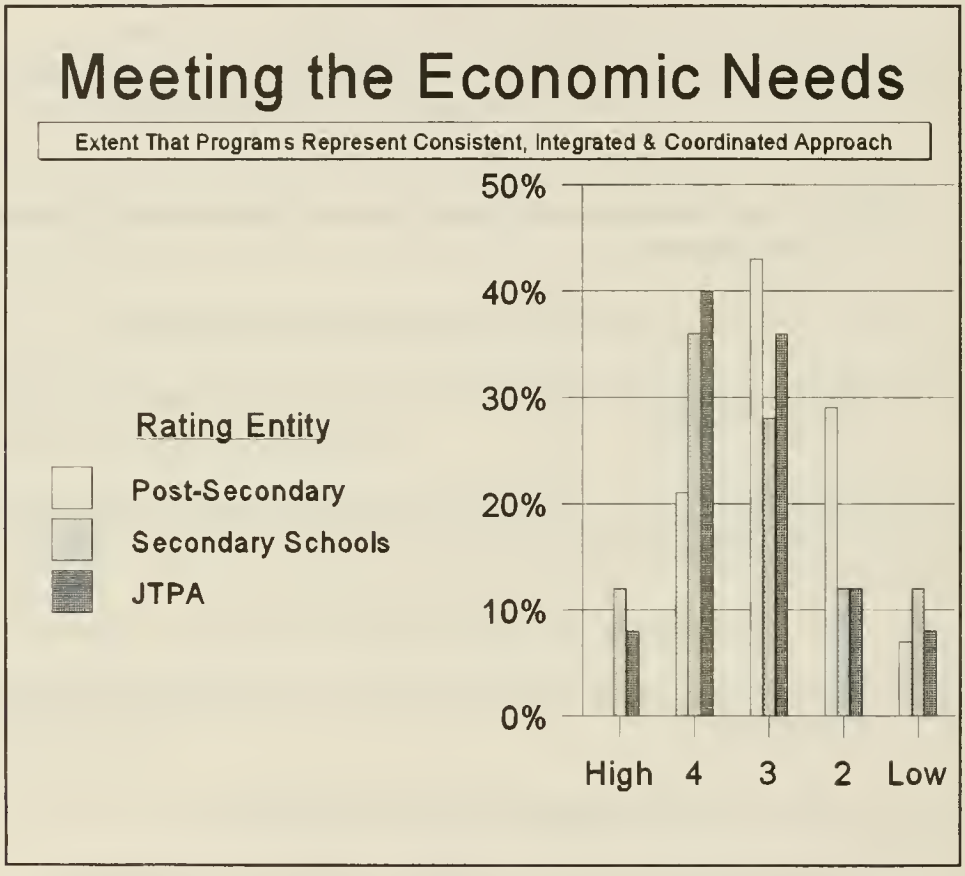
- More policies allowing the use of Montana resources should be adopted.
- There should be a legislative mandate to develop Montana's workforce.
- Montana should adopt a stronger policy providing funding to aid economic development in the state.
- Education needs to be more tied into economic development.
- There should be more incentives for new Montana businesses.
- Economic development goals should be established for Montana.

JTPA Comments on Improving Economic Development in Montana

- The cost of transportation for producers should be lowered.
- Business expenses are too high. The cost of Workers Compensation and utilities, for example, should be lowered.
- There should be an equal partnership among government, business, and labor to actively pursue economic development in the state.
- There must be training for expanding occupations.
- More incentives (tax credits) for hiring the non-traditional and disadvantaged should be implemented.
- The higher education system should be streamlined.
- Technical assistance should be easily available for small businesses.
- Incentives for "clean" industries to locate in Montana should be adopted.
- More business leadership is needed in designing an integrated education, job training, and economic development system in Montana.
- More initiatives for entrepreneurs are needed with proper funding.
- More dollars to train displaced homemakers, single heads of households, and the married poor are desperately needed.
- The higher education curriculum acceptance process should be streamlined.

Rating the Consistency, Integration & Coordination of Programs to Meet the Economic Needs of MT

All persons responding to the MCVE survey were asked to rate the extent to which vocational technical education, employment, and training programs in Montana represent a consistent, integrated, and coordinated approach to meeting the economic needs of the state. Results are illustrated in the chart that follows.

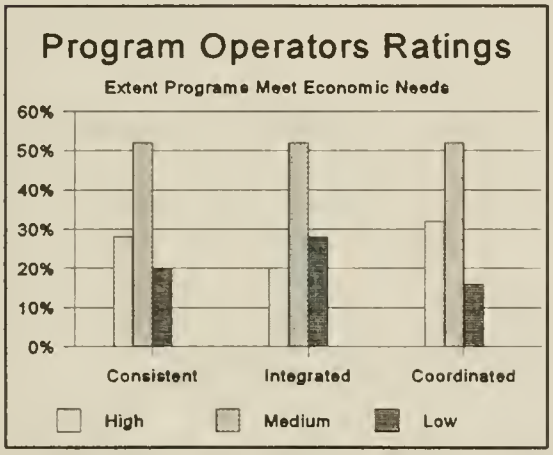


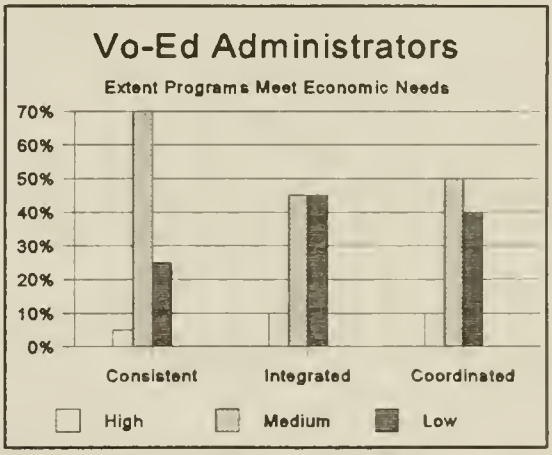
The chart shows survey results which indicate that, overall, vocational education, employment, and training programs do represent at least a moderately consistent, integrated, and coordinated approach to meeting the economic needs of the state. The average rating of all survey responders on a scale from 5 to 1 (with *5 being highest* , *3 being moderate*, and *1 being low*) was *3.15*. Postsecondary participants felt that the consistency, integration, and coordination was lower than their secondary school/JTPA counterparts. Thirty-six percent of secondary school survey participants gave a rating of *4* and another 28% gave a *3* rating. JTPA responders had similar evaluations with 38% giving a *4* rating and 35% rating the approach as *3*. The most frequent (43%) rating by postsecondary institutions was *3* and the next most occurring response (29%) was *2*.

Previous MCVE Study Findings Relevant to Meeting Economic Needs

March 1995 MCVE Study

A study completed in March 1995 by the Montana Council on Vocational Education reported findings from a January 1995 survey of JTPA program operators and vocational education administrators in the state on the extent to which postsecondary vocational-technical education programs in conjunction with other employment and training programs within the state provide a consistent, integrated, and coordinated approach to meeting the economic needs of Montana. The graphs below show January 1995 survey results.





Although survey participants were not asked the identical question in the January 1995 and the May/June 1995 surveys, the results of the two surveys are similar. Postsecondary administrators rate the approach slightly higher in the January survey. What is clear is that all the parts need to work together to make the system work effectively.

Survey of Vocational Technical and Job Training Service Providers

Although somewhat dated at this point, a 1990 study by MCVE provides information that is still pertinent today. The study involved obtaining responses from postsecondary vocational technical institutions, secondary vocational education, JTPA programs, tribal colleges, and employers.

Important Employee Competencies

The following desirable employee competencies are listed in the rank order as identified by survey individuals responding to the 1990 MCVE survey.

1. Positive work habits and attitudes
2. Ability to follow directions
3. Ability to assume responsibility
4. Communication skills
5. Interpersonal skills
6. Basic math and science skills
7. Reasoning and problem solving skills
8. Reading and writing skills
9. Leadership skills
10. Specific vocational and technical skills
11. An understanding of economic concepts

Better Utilizing Vo-Ed and Other Delivery Systems for Economic Development

The 1990 survey by MCVE acquired suggestions from respondents for better utilizing vocational technical education and other delivery systems for economic development purposes. Among the responses were the following which closely parallel responses obtained in the May/June 1995 surveys.

- The state needs to recognize vo-ed as a primary part of economic development.
- Equip delivery systems so training can be provided on various sites.
- More outreach courses should be established.
- Linkages with business and industry should be strengthened.

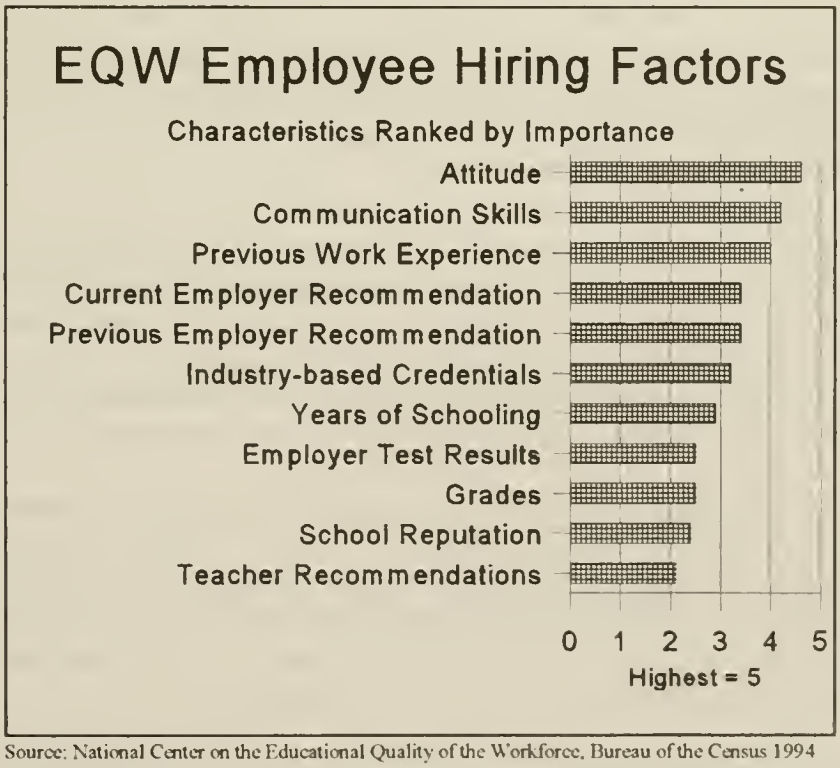
EQW National Employer Survey 1994

Some Findings Related to this Study

The National Center on the Educational Quality of the Workforce (EQW) in its 1994 national employer survey administered by the Bureau of the Census reported findings that correlate with the 1990 MCVE study on important employee competencies. The EQW survey reported that although years of schooling and the skills certificates applicants possess are a factor in employers' screening and hiring decisions, they pay little attention to measurements of school performance. What employers consider most important, according to the survey, is how the applicant presents himself or herself -- in terms of attitude and communication skills -- and whether or not he or she has a successful history of previous work experience.

Important Hiring Factors

The graph below shows the results of the EQW survey in terms of the importance placed on various characteristics utilized in employee hiring.



Source: National Center on the Educational Quality of the Workforce, Bureau of the Census 1994

The Bragg/Lewis Business Retention and Expansion Project

In August 1995 The Montana Ambassadors completed the first phase of a study designed to determine how Montana businesses could become more successful. Through personal interviews, business owners and managers were asked to identify problems leading to decisions to relocate operations outside Montana or limiting opportunities for expansion. Ninety-two Montana businesses participated in the study. The businesses represented the state geographically and were significant primary employers within their region. The Ambassador study is noteworthy for this report because of its findings relative to education and training in Montana.

Bragg/Lewis Findings Related to Education and Training

The Bragg/Lewis study dealt with several factors hindering business in Montana. Significant hardships reported were workers' compensation, taxes, waste disposal, and availability of affordable housing.

In the area of education and training, 91 percent of those surveyed felt worker productivity was excellent to good in Montana. **However, 35 percent of survey participants reported difficulty in finding qualified workers.** Among the comments from survey participants were: "Our Schools do not train people for the work place" and "We [businesses] spend too much time training."

According to some who participated in the study, "Out-of-state applicants are hired for Montana jobs because graduates of secondary schools and colleges of technology do not have the skills offered by out-of-state applicants." Lack of communication between education and industry/business leaders and between employers and employment services were listed as problem areas. A follow-up study will be conducted by the Ambassadors to determine specific training needs that Montana employers have that are not being met.

A statewide video conference sponsored by the Montana Ambassadors on the Bragg/Lewis study was held on September 11, 1995. During the conference Governor Racicot expressed surprise at the findings as they pertained to education and training. He suggested that more *training must be done for the market*. A recommendation was made at the conference to have a "summit" meeting of business and educational leaders to work toward solution of the concerns reported in the Bragg/Lewis study.

The study indicates that efforts are underway to resolve skilled-worker problems. For example, finding skilled workers was a concern for Semitool of Kalispell. Eighty percent of

Semitool's jobs require skilled labor, but not four years of college education. Representatives of the Helena College of Technology met with company managers and as a result, the College is now aware of the specific skills needed and is developing curriculum to meet those needs. In return, the business is encouraging students to seek education at the Helena school and recently hired three graduates.

Concerns Expressed About Education and Training in Montana by MEDA

The Montana Economic Developers Association

The Montana Economic Developers Association (MEDA) is an association of economic development professionals. The organization is made up of economic developers, business specialists, government employees, and staff members of affiliated nonprofit organizations which promote or foster economic development activities in Montana. MEDA sponsors educational seminars, workshops, and conferences and conducts research to stimulate the interchange of ideas and experiences.

MEDA Concerns

At their annual meeting in Great Falls in May 1995, several concerns about education and training were expressed by members during a forum with College of Technology staff from Montana State University -- Great Falls. These concerns were:

- There should be less bureaucracy in establishing new job training programs.
- Job training programs need to be more flexible and able to respond immediately to company and market needs.
- Training programs should be able to satisfy reoccurring as well as new business training needs.
- Funding for company training should not be the sole responsibility of the company.
- Programs need to be viable to what is currently needed. Programs should not be continued if there is no market for program completers.
- Education and training needs to reach out more to the public and business.
- Training programs shouldn't just teach what the students want but must also teach what businesses need and want.

- The delivery of programs needs to be available where the need is. For example, a technology program from Havre should somehow be available in Boulder.

- There should be coordination of all work-related programs -- universities, colleges of technology, adult education, high schools, etc.

- There should be more help readily available from colleges of technology or other training programs for businesses needing training programs. This help should alleviate the sometimes overwhelming burden of organization that companies face when designing their own programs. The assistance should help determine what training is required and then set up a program to carry out the requisite training required.

Customized Training is Offered

New Directions for the Colleges of Technology

As discussed previously, the Montana business community has been critical of education's ability to provide skilled workers in a timely and appropriate manner in some needed areas of employment. The postsecondary vocational-technical institutions in Montana are aware of this concern and are offering an increasing number of customized training programs to meet employer demands. All institutions can point to specialized training they have undertaken with local and out-of town businesses. Considerable effort is being expended to meet immediate and short-term training needs as well as offering courses of instruction that meet continuing and stable market demands for technologically skilled workers. [Note: overall program offerings will be discussed in more detail in Chapter 4 of this report].

Customized Training Opportunities for Business in Great Falls

At the MEDA conference discussed previously in this report, representatives from Montana State University College of Technology -- Great Falls presented a program of customized training available to business and industry. Details of what MSU College of Technology -- Great Falls is doing is presented here to illustrate what is going on in this crucial arena.

In 1994 Montana State University College of Technology-- Great Falls worked with 744 persons who participated in 46 customized training workshops for various businesses and organizations. Some of the participating businesses or employers were the City of Great Falls, Columbus Hospital, Easter Seals/Goodwill, Farm Credit Service, 1st Liberty Credit Union, General Mills, the Great Falls Tribune, Malmstrom Air Force Base, Montana Hospital Association, Native American Center, Pacific Steel and Recycling, and Transystems, Inc.

Topics for these programs included microcomputer applications, customer service, Total Quality Management, Work Safety Culture Act, basic construction concepts, communication styles, group dynamics, records management, welding, business letter writing, the Information Super Highway, and telephone techniques.

Classes are generally scheduled Mondays through Saturdays at the company site or on campus at a time convenient and conducive to the companies or organizations involved.

Efforts to Speed Up Program Adoption

The Division of Technology of Montana Tech of The University of Montana recently launched in relatively rapid fashion a two-year degree program in response to a skilled labor shortage in environmental remediation. In January 1995 the Division enrolled 40 students into the Environmental Sampling and Hazardous Materials Program. This program was developed through an advisory committee containing representatives from education, industry, and government. Input and expertise was solicited statewide from teachers, engineers, management, union leaders, and Job Service personnel. The advisory committee conducted a needs assessment survey and reviewed existing national curricula. New course work that would specifically address mine wastes and field sampling was then generated. The process of developing the entire program and seeking approval from the Montana Board of Regents of Higher Education was accomplished in less than 11 months.

4

Availability of Vo-Ed Activities in Montana

Vocational-Technical Education in MT -- A Vast Entity

Vocational education offers a series of programs designed to prepare people to enter and successfully perform in the world of work. Individual differences and preferences, availability of resources, and employment demands cause the delivery of vocational education to vary throughout the state. More than 175 different skill training programs are provided by public programs in 122 high schools, and 18 postsecondary vocational-technical institutions, community colleges, tribal colleges, and universities.

Vo-Ed Administration in Montana

Secondary Schools

Administration of public secondary school programs lies with local school districts under the authority of the Office of Public Instruction and the State Board of Public Education.

Postsecondary Institutions

Colleges of Teohnology

Governance of the two-year postsecondary vocational-technical institutions came under the jurisdiction of the Montana University System in July 1987. As a result of University System restructuring in July 1994, colleges of technology in Butte, Helena, and Missoula were attached to The University of Montana and the units in Billings and Great Falls became part of Montana State University. Two-year programs at four-year colleges were also affected by reorganization. Northern Montana College was attached to Montana State

University, while Western Montana College and Montana Tech became part of The University of Montana. The University System is under the direction of the Office of the Commissioner of Higher Education through the State Board of Regents. The commissioner and agency personnel are responsible for providing leadership, technical assistance and staff support to the Board of Regents and postsecondary education institutions to enable coordination, consistent regulations and management, evaluation of policies and programs, and long-range planning.

Public Community Colleges

Public community colleges are located in Miles City (Miles Community College), Glendive (Dawson Community College), and Kalispell (Flathead Valley Community College). The community colleges are currently governed independently through the Board of Regents. There have been attempts to integrate the community colleges into the Montana University System, but the public community colleges currently remain as a separate entity.

Native American Community Colleges

Native American community colleges are located in Harlem (Fort Belknap College), Poplar (Fort Peck Community College), Browning (Blackfeet College), Pablo (Salish-Kootenai College), Crow Agency (Little Big Horn College), Box Elder (Stone Child College), and Lame Deer (Dull Knife Memorial College). Tribal community colleges are governed by their respective tribal councils.

Strategies for Delivering Vocational Education in Montana

Strategies for the delivery of vocational education vary among school districts and among postsecondary institutions in Montana. Some of the many strategies utilized are described in the information that follows. Nearly all programs employ a variety of strategies to meet student needs.

In-School Vocational Instruction

The most commonly utilized strategy in Montana is vocational instruction within the school. Classroom and laboratory experiences are conducted within the school's existing facilities.

Extended Campus

This strategy involves using community facilities as an extension of a specific vocational program. This approach is widely used in conjunction with the In-School strategy throughout Montana. The instructor and students move from the school to extended campus facilities for planned laboratory experiences.

Cooperative Vocational Education

Cooperative vocational education is used extensively in Montana and occurs when there are written cooperative arrangements between the school/institution and employers by alternation of study in school with on-the-job training. These arrangements take on a number of different forms and can include internships and apprenticeships.

School-to-Work

School-to-Work is a broad overall philosophy and approach that weaves components of a variety of vocational strategies to allow students to move from school to work or from school to continued education and training. School-to Work systems integrate academic and vocational education, provide linkages between secondary and postsecondary education, and integrate academic and occupational learning. Academic classes at school are combined with hands-on learning and training in the workplace. Partnerships are built between schools, employers, students, parents and community. Each program is developed on a local basis.

In Montana statewide coordination of School-to-Work activities is administered by the Office of the Commissioner of Higher Education. In addition, the Office of Public Instruction provides a staff member to carry out School-to-Work coordination for grades K-12.

Tech Prep

Tech Prep is the technical educational alternative to College Prep. It is targeted for, but not limited to, general education students. Tech Prep rests on a foundation of applied academics, courses that incorporate real-life applications and hands-on experience into the teaching of academic subjects. A Tech Prep/Associate Degree program is a designed curriculum that engages a high school student in a four-year (2+2) or six-year (4+2) plan to gain the competencies required for technical careers.

According to the Montana State Plan for Vocational Education 1994-96, a Tech Prep program is a combined secondary and postsecondary program which:

1. Leads to an associate degree or two-year certificate;

2. Provides technical preparation in at least one field of engineering technology, applied science, mechanical, industrial, or practical art or trade, or agriculture, health or business;

3. Builds student competence in mathematics, science, and communications through a sequential course of study and;

4. Leads to placement in employment.

Vocational Student Organizations

Although vocational student organizations (VSO's) are not technically a delivery system, they are such an important, visible, and integral part of vocational education programs in Montana at the secondary level that they cannot be easily separated from the regular program. Active, recognized vocational student organizations and the number of chapters in Montana are shown below:

- ★ Vocational Industrial Clubs of America (VICA) -- 43 chapters
- ★ Distributive Education Clubs of America (DECA)-- 16 chapters
- ★ Business Professionals of America (BPOA) -- 46 chapters
- ★ Future Farmers of America (FFA) -- 65 chapters
- ★ Future Homemakers of America/Home Economics Related Occupations (FHA/HERO)-- 99 chapters
- ★ Technology Student Association -- 16 chapters

Distance Learning

Technological learning advances now and in the near future make the possibilities of distance learning almost endless for vocational-technical education in Montana. Distance learning, particularly at smaller high schools, has been utilized in secondary vocational education through METNET for the last several years. At the postsecondary level options are available for courses and workshops to be offered via interactive video and satellite down linking for teleconferences. METNET interactive video sites are located in Billings, Bozeman, Butte, Dillon, Great Falls, Havre, Helena, Kalispell, Miles City, Missoula, and Warm Springs.

Also available for consideration and utilization are vocational-technical or other education courses offered via the Internet. This option appears to be one that will increase over the next five to ten years due to the increasing costs of traditional education. Flathead Valley Community College, in particular, has been experimenting with this approach.

Current Activities

Restructuring of the Montana University System -- Phase 2

In July 1995 the Commissioner of Higher Education announced goals for Phase 2 of the restructuring of the Montana University System. These goals and related recommendations for implementation will be discussed and reviewed by the Board of Regents. Board approval is slated for spring 1996 with tentative target dates for implementation activities to occur during 1996 and 1997. Overall goals for Phase 2 are contained in the following four elements of the education process:

(1) Getting in -- making the transition between current and postsecondary education;
(2) Getting through -- overcoming the many academic and nonacademic challenges that are part of the educational experience;
(3) Getting a job -- finding employment after graduation, particularly a job that utilizes a person's education; and
(4) Paying the way -- coping with rising prices, shifting financial aid responsibilities, and weakening government support.

The July 1995 report to the Board of Regents by the Commissioner included the following areas of further study and review which will have specific importance to vocational-technical education in Montana:

* Shortening time to degree by focusing on the front end of the entry process, the high school /postsecondary transition, and emphasizing advanced placement, tech prep, and other programs that meld secondary and postsecondary schooling.

* A systematic assessment process that evaluates the skills attainment and employer satisfaction of Montana University System program graduates.

* Incentives to support outstanding teaching.

* Recommendations that address new workforce realities and provide specifics for the advancement of two-year education.

School-to-Work

Among current activities involving School-to-Work, fifteen Montana communities received local partnership development grants in 1995. The grants were jointly sponsored by the Governor's Office, the Office of Public Instruction, the Office of the Commissioner of Higher Education, the Department of Labor and Industry, and the Department of Commerce. The grants, ranging in amounts of $3000-$5000, provide community help to defray the start up costs associated with establishing local School-to-Work partnerships.

At a School-to-Work news conference at the State Capitol in October 1995 Governor Racicot, among other state officials, announced support for the School-to Work program The Governor stated: "In an age when partnerships have become increasingly important, the School-to-Work system offers an opportunity for us to work together in a way that will benefit all Montanans. Montana's School-to-Work transition system will link business executives, shop owners, organized labor, ranchers, and farmers with teachers, school administrators, parents and students to develop the knowledge and skills businesses need their employees to possess."

At the same news conference School-to-Work program information was presented to the public. The availability of grants (Local Partnership Development Grants, Local Partnership Continuation Grants, and Local Implementation Grants) was emphasized, along with program goals and components. Conference organizers indicated that an unprecedented degree of shared decision-making and joint team activities was going into the School-to-Work initiative in Montana.

The 1995 State Tech Prep/School-to-Work Conference was held in Butte during March. The conference theme was "Making the Connection" and featured more than forty presenters who demonstrated the importance of making the connection between education and business, teachers and subject areas, classrooms and the workplace, schools and parents, secondary and postsecondary institutions, and students and counselors. Dr. Dale Parnell was the featured speaker. He emphasized the importance of providing meaning in education and listed the ways in which Tech Prep is a vital component of School-to-Work.

Conference attendees were introduced to innovative projects by presenters from across the state. For example, Butte and Anaconda schools in partnership with ARCO have initiated several successful projects working with Superfund sites. Rapelje High School described strategies for small communities to initiate school/business partnerships. An applied math project (SIMMS) was described as "being based on real life problems and designed to reach all students."

Tech Prep Availability to Secondary Schools

Tech Prep in Montana appears to be viable and growing. A survey of postsecondary vocational-technical institutions in October 1995 elicited the following data as to the number of articulated tech prep agreements each institution had completed with secondary schools. Although this information reflects only one aspect of Tech Prep, it gives an indication of the current status of Tech Prep coordination that is occurring. Survey results are shown below.

Articulated Agreements of MT Postsecondary Institutions with MT Secondary Schools (1995)

MT Postsecondary Institution	No. of Articulated Agreements
College of Technology of The UM Missoula	28
Helena College of Technology --The UM	2
MSU Billings College of Technology	11
MSU College of Technology Great Falls	29
MSU Northern	11
MT Tech UM Division of Technology	7
Western MT College of The UM	21

Secondary School Vo-Ed Program Statistics

1995-1996 Approved MT Vocational Programs

The chart below shows the number of approved vocational education programs by category and the number of participating students involved in those programs during the fall semester of the 1995-1996 school year in Montana.

Approved Programs in MT 1995		
Program	No. of Approved Programs	No. of Students Enrolled
Agriculture	54	3,533
Business	130	11,070
Health Occupations	2	70
Home Economics	123	9,114
Marketing	15	1,216
Technology Education	99	7,476
Trade and Industrial	35	5,100
Co-op programs	35	908
TOTALS	493	38,487

Compiled from Office of Public Instruction secondary vo-ed data for 1995-1996

There are approximately 48,000 public high school students in Montana. Thus, during the 1995-96 school year around 80% of high school students are involved in some way with vocational education. It is interesting to note that the largest enrollment is in business, followed by home economics. The vast majority of school districts offer programs in these vocational areas. Technology education and trades and industrial education show very strong enrollments, as does agriculture. These programs are found in a wide variety of school districts, from small to large. Among the larger school districts, however, only Kalispell and Billings offer agricultural education. The number of marketing education programs has decreased during the last several years, but the individual programs have solid programs and enrollments. Health occupations programs, which have never been a widespread high school vocational offering in Montana, are only available in large districts. These programs are available at the Billings Career Center and at Flathead County High School in Kalispell. Co-op programs involve less than 3% of vocational students.

Secondary School Availability/Limitations

Overall, high school vocational education programs are accessible to most secondary students in Montana. There are, however, limiting factors to programs being available to all students. The MCVE survey conducted in May/June 1995 for this report asked survey responders to indicate limitations as to the availability of vocational programs to students.

Limitations as to Availability of Secondary Vo-Ed Programs			
Limiting Factor	% of Responses	Limiting Factor	% of Responses
Limited class size	17%	Adequate funding	10%
Graduation requirements	17%	Career counseling	5%
Lack of facilities	12%	Accessibility for special populations	5%
Scheduling problems/conflicts	12%	Image of vocational education	5%
No limitations	12%	Outdated equipment	5%

The most frequent limiting factors for students not enrolling in vocational education classes according to this survey was *class size* and *graduation requirements*. Classes are often full and not available to all who want to enroll, according to the survey. Survey responders felt that graduation requirements impede students from taking vocational classes, due to students having to take other required courses. *Scheduling problems and conflicts* also prohibit students from taking vo-ed classes, survey participants believed. Along with this concern, there also was a feeling among vocational educators that many curriculums are college oriented or directed and that vocational education courses do not get appropriate or equal treatment when school master schedules are designed.

Lack of facilities limitations ties in with class size restrictions. There sometimes are not enough facilities to offer the necessary number of vocational courses to meet student demands, and some facilities and programs are not *accessible for special populations.* Another related delimiting factor is the relatively high cost of some vocational facilities, *equipment*, and materials. *Adequate funding* (or the lack thereof) is a concern of many vocational educators.

Career counseling is of concern to some vocational educators because of the perception that counselors are often college-oriented and, therefore, don't encourage students to take vocational courses. Along with this there is a feeling that, real or imagined, vocational education is a second-class program that is for the less than academically inclined. This *image* problem has been around forever and remains a challenge to all who are involved with vo-ed.

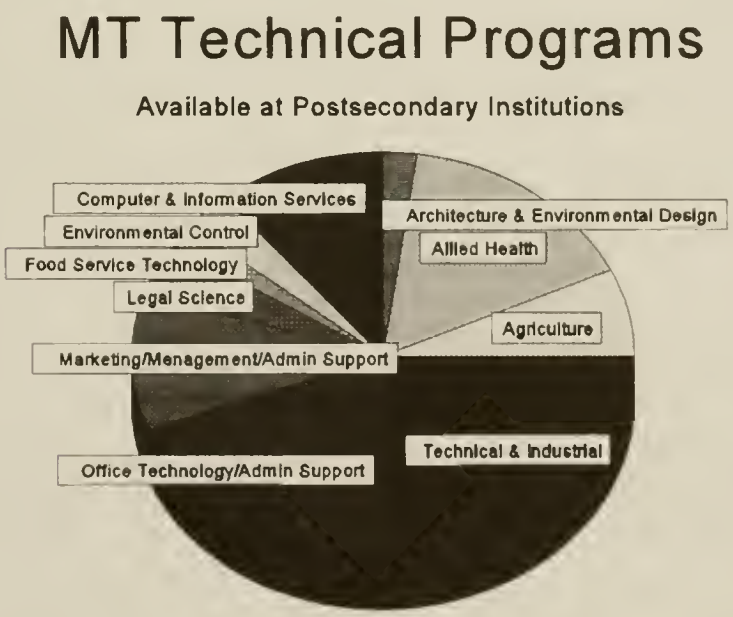
Postsecondary Program Information

Postsecondary Vocational-Technical Education Program Offerings in Montana

Montana's postsecondary vocational-technical institutions offerings are very diverse. Currently the colleges of technology offer certificates or associate of applied science degrees for specific vocations, rather than associate of arts degrees designed to provide transfer credits to a four-year college. With restructuring of the university system, there is consideration of a core curriculum acceptable to all units of the system. The community colleges are also working on transfer of credits and core curriculum possibilities.

A 1995 project by the Montana Ambassadors, the University of Great Falls, and MSU College of Technology -- Great Falls compiled a guide to certificate and associate degree programs available in the state. Included in the guide are programs at the colleges of technology, the public community colleges, the tribal colleges, and private colleges having cooperating agreements.

Programs of a similar nature in the guide are grouped. The graph below illustrates the vast array of programs available, shown proportional to the number of programs offered. Actual programs are presented on the following three pages.



Source: *Your Guide to MT's Postsecondary Technical Education Programs.* Compiled by MSU College of Technology –Great Falls, 1995.

Postsecondary Technical Programs in MT 1995-1996

A = Associate of Arts
Associate of Science
Associate of Applied Science

C = Certificate

	Montana University System								Community Colleges			Tribal Colleges							Private Colleges		
	Colleges of Technology					4-Year															
	Helena COT-UM	COT UM Missoula	MSU Billings COT	MT Tech UM Dv/Tch	MSU COT-Great Falls	MSU Billings	MSU Northern	Western MT Coll-UM	Dawson CC	Flathead Valley CC	Miles CC	Ft. Belknap College	Ft. Peck CC	Blackfeet CC	Salish-Kootenai Coll	Little Big Horn CC	Stone Child College	Dull Knife Mem Coll	Univ of Great Falls	Carroll College	Rocky Mtn College
AGRICULTURE																					
Agri Business									A												
Agri Business-Equitation									A												
Agricultural Science									A	A											
Agriculture Technology							A														
Agri-Diesel Technology	C																				
Agri-Mechanics Technology							A														
Fish & Wildlife Management									A		A										
Forestry/Forest Technology										A	A				A						
Livestock Technology									C												
ALLIED HEALTH																					
Chemical Dependency Counseling									A	A		A	A	A	A	A		A	AC		
Child Development/Early Childhd Education						A		A		A				A		A			A		
Dental Assistant					C										AC						
Emergency Medical Technician					C																
Health Science																			A		
Human Services-Family/Consumer Sciences																A			A		
Human Services-Foster Home Parenting													C								
Human Services-Juvenile Corrections									A		C								A		
Human Services-Recreation Leader																			A		
Human Services-Rehabilitation																			A		
Human Services-Social Justice										A											
Human Services Technology									A	A		A	A	A	A	A	A		A		
Nursing-Practical	C	C	C	C	C																
Nursing-Registered							A				A				A						
Occupational Therapy Assistant					A																
Physical Therapist Assistant					A																
Psychology (Applied/Gerontology)						A															
Respiratory Therapy Technician		C			C																
Respiratory Therapist					A																
Special Education						A															
Surgical Technology		C																			
ARCHITECTURE & ENVIRONMENTAL DESIGN																					
Interior Design					A																
Graphic Design/Computer Graphics							A														
Advertising Design								A													
COMPUTER & INFORMATION SCIENCES																					
Computer Assistant					C								A								
Computer Information Systems							A	A							A						
Computer Science										A	A						A		A	A	
Computer Technology	A																				
Data Entry/Computer Operations			C									C									
Data Processing											A	A	C			A					
Information Processing		C	C	A							A	A									
Microcomputer Accounting Technology			A																		
Microcomputer Applications			A						AC	A											AC
Microcomputer Applications & Systems									A												
Microcomputer Applications Specialist			A						AC												
Microcomputer Management					A														A		
Microcomputer Support/Specialist/Tech									AC												
Microcomputer Technology		A																			
ENVIRONMENTAL CONTROL TECHNIQUES																					
Environmental Sampling/Hazard Material				A									A								
Natural Resource Management										A		A	A					A			
Water Quality Tech/Environmntl Health							A														
Environmental Science															A	A					
FOOD SERVICE TECHNOLOGY																					
Culinary Arts		C	C																		
Food Service Management		A																			

Source: *Your Guide to MT's Postsecondary Technical Programs*, compiled by MSU College of Technology -- GF, 1995.

Postseoondary Technical Programs in MT 1995-1996

A = Associate of Arts
Associate of Science
Associate of Applied Science

C = Certificate

	Montana University System								Community Colleges			Tribal Colleges							Private Colleges		
	Colleges of Technology					4-Year															
	Helena COT-UM	COT UM Missoula	MSU Billings COT	MT Tech UM Dv/Tch	MSU COT-Graat Falls	MSU Billings	MSU Northern	Western MT Coll-UM	Dawson CC	Flathead Valley CC	Miles CC	Ft. Belknap College	Ft. Peck CC	Blackfeet CC	Salish-Kootenai Coll	Little Big Horn CC	Stone Child College	Dull Knife Mem Coll	Univ of Greet Falls	Carroll College	Rocky Mtn College
LEGAL SCIENCE																					
Criminal Justice									A				A						A		
Law Enforcement(Peace Offc/Private Sec)									A												
Legal Assisting (Paralegal)		A																	A		AC
Legal Receptionist					C																
Legal Secretary/Technology	A	A	A	A	A					A				A							
MARKETING/MANAGEMENT/BUSINESS																					
Business Administration						A	A		A	A	A										
Business Management/Administration								A	A	A	A	A	A	A		A	A		A		
Business Management/Entrepreneurship		A			A																
Fashion Sales & Marketing		AC																			
Food & Beverage Management		A																			
Hospitality Management										A											
Human Resource Management								A													
Mid-Management											A										
Museum & Gallery Management										A											
Parts Management & Sales Technology									AC												
Retail Management		A								A											
Sales & Marketing		C								A									A		
Small Business Management				AC						A				A							
Tourism & Recreation Management								A		A											
Tribal Administration													A								
OFFICE TECHNOLOGY/ADMINISTRATIVE SUPPORT																					
Accounting Assistant					C																
Accounting Technology	A	A	A	A	A					A									A		
Administrative Assistant	A		C	A	A				A		AC										
Administrative Aide	C																				
Bookkeeping	C	C		C									C								
Business								A						A							
Dental Receptionist					C																
Executive Secretary			A						A	A	A			A							
Fundamentals of Business/Small Business					C																
Health Information Technology					A																
Human Resource Management								A													
Information Processing	A	C		A				A													
Medical Assistant					A					A	A										
Medical Office Technology		A									A										
Medical Receptionist	C	C		C	C																
Medical Record Technology															A						
Medical Secretary	A		A	A	A					A	A			A							
Medical Transcription					A																
Office Administration		A													AC			AC			
Office Assistant	C			C	C				C												
Office/Records Clerk			C										C								
Office Secretary			C																		
Office Technology								A					A		A						
Receptionist		C	C																		
Secretarial Science/Technology							A		A								AC				
Secretary/Stenographer									A							C					
Word Processing	C			C		A				A											
TECHNICAL & INDUSTRIAL																					
Auto Body Collision/Repair & Refinishing			C		C		A														
Automotive Parts Specialist									AC												
Automotive Technology	AC		A	A			A		A		AC		AC								
Aviation										A											
Aviation Maintenance Technology	A																				
Building Maintenance/Engineering		AC																			
Carpentry	C											A	AC		C	A	C				
Civil Engineering Technology				A			A														

Source: *Your Guide to MT's Postsecondary Technical Programs*, compiled by MSU College of Technology – GF, 1995.

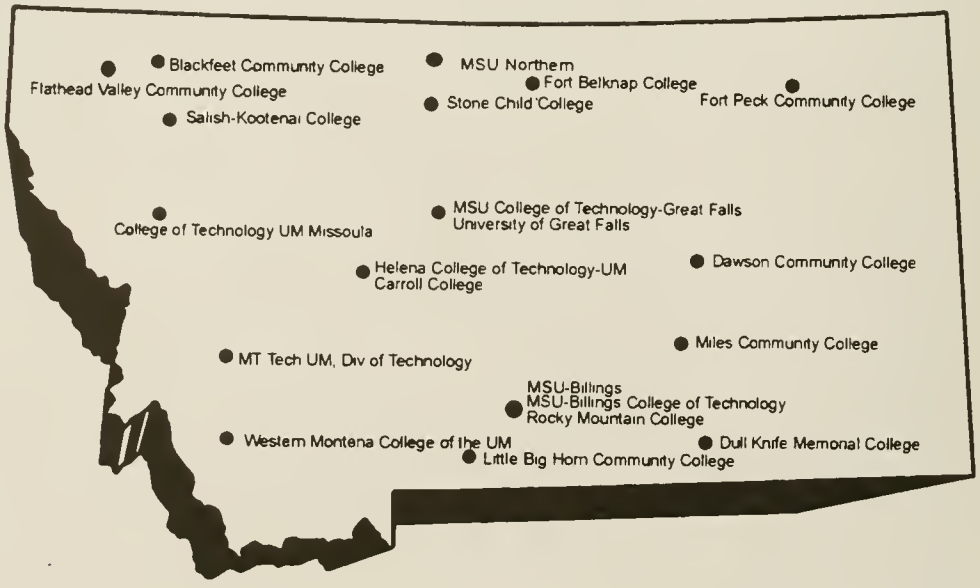
Postsecondary Technical Programs in MT 1995-1996

A = Associate of Arts
Associate of Science
Associate of Applied Science

C = Certificate

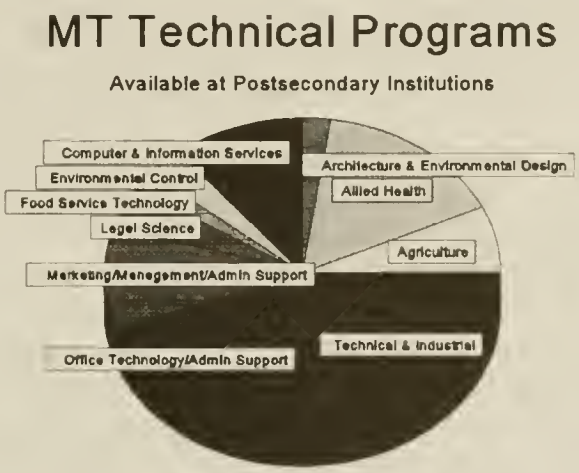
	Montana University System								Community Colleges			Tribal Colleges							Private Colleges		
	Colleges of Technology					4-Year															
	Helena COT-UM	COT UM Missoula	MSU Billings COT	MT Tech UM Dv/Tch	MSU COT-Great Falls	MSU Billings	MSU Northern	Western MT Coll-UM	Dawson CC	Flathead Valley CC	Miles CC	Ft. Belknap College	Ft. Peck CC	Blackfeet CC	Salish-Kootenai Coll	Little Big Horn CC	Stone Child College	Dull Knife Mem Coll	Univ of Great Falls	Carroll College	Rocky Mtn College
Construction Technology														A							
Diesel Equipment Technology		A																			
Diesel Technology			C				A														
Drafting			C	C																	
Drafting, CAD Technician			C																		
Design Drafting Technology							A														
Drafting Technology			A	A																	
Electronics Engineering Technology							A														
Electronics Technology	A	A								A	AC		A								
Engineering										A											
Heating, Ventilation & Air Conditioning			A																		
Heavy Equipment Operation		C																			
Highway Construction															C						
Land Surveying Technology										A											
Machine Tool Technology	C																				
Major Appliance Repair Technician			C																		
Manufacturing Technology							A														
Metals Fabrication Technology			C																		
Metals Technology - Machining/Welding							A														
Power Plant Technology											A										
Small Engine & Equipment Technology		C																			
Truck-Diesel Technology	C																				
Truck Driving		C																			
Welding Technology/Combination Welding	C	C		C																	

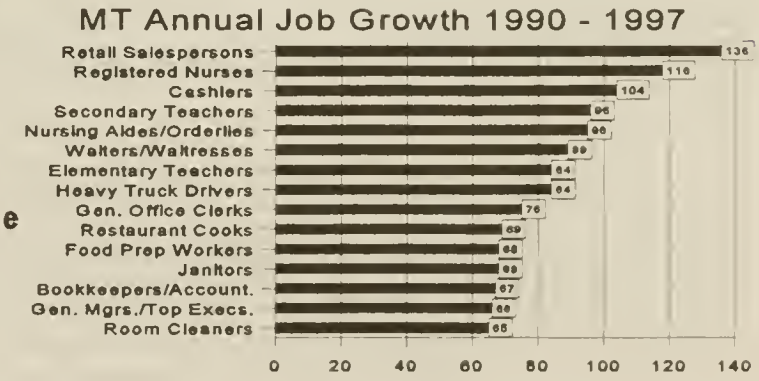
Source: *Your Guide to MT's Postsecondary Technical Programs*, compiled by MSU College of Technology – GF, 1995.

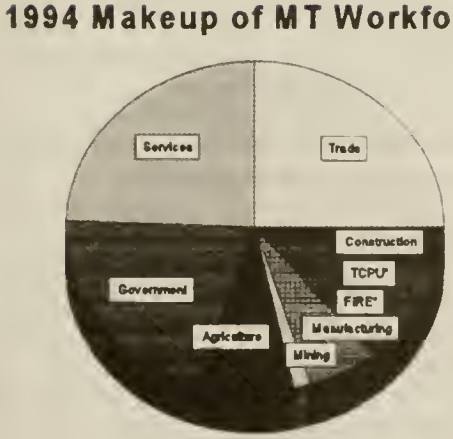


Postsecondary Program Offerings vs. Needs

In Chapter 2 of this report economic needs of Montana were discussed. In Chapter 3 concerns were expressed by the Montana Ambassadors, among others, about meeting the employment needs. When comparing the needs with the offerings, the postsecondary programs do offer course work and training in most areas of employment needs. Given the new emphasis on program flexibility, programs will be designed in the future even more in line with what the marketplace demands. The graphs below (presented previously in this report) show available program areas, Montana workforce makeup, and Montana's largest growing occupations.







New Program Possibilities

The May/June 1995 MCVE survey of postsecondary educators asked responders to indicate the new training programs that they felt should be initiated to more effectively meet employer needs within their service area or the state. The following responses were received from survey participants. (Note: Some of these programs are already offered.)

1995 MCVE Survey -- Suggested New Postsecondary Programs			
Program	No. of Responses	Program	No. of Responses
Biotechnology/environmental tech	4	Criminal justice	1
Electronics	3	Railroad employment	1
Food and beverage	2	Hotel/motel management	1
Graphics/printing	2	Child care	1
Manufacturing technology	2	Computers	1
Agriculture	1	Tourism related	1
Computer assisted drafting	1	International business	1
Medical lab technology	1	Manufacturing technology	1
Para-professional occupations	1	Paralegal	1
Pharmacy technology	1	Hospitality	1

Barriers to Postsecondary Availability

When asked to indicate the limitations as to the availability of their programs to the public, 1995 MCVE postsecondary survey responders gave the answers that follow.

1995 MCVE Survey -- Barriers to Postsecondary Availability			
Barrier	% of Responses	Barrier	% of Responses
Limited class sizes	40%	Accessibility to special populations	5%
Lack of facilities	30%	No limitations	5%
Facility availability weekends	5%	Lack of public information	5%
Lack of staff	5%	Location of facility	5%

1995 Study on Two-Year Postsecondary Education in Montana by the Legislative Fiscal Analyst's Office

In October 1995 the Legislative Fiscal Analyst's Office released a report on postsecondary two-year education in Montana. The report was prepared for the Postsecondary Education Policy and Budget Committee of the Montana State Legislature. Several findings from the Fiscal Analyst report are of significance to this report.

Postsecondary Enrollment Approaching Capacity

The Fiscal Analyst report indicates that by 1999 the colleges of technology will reach capacity (approximately 3500 students). The projected student demand for job skill training at the colleges of technology exceeds the demand for the lower division college courses and vocational training at the community colleges.

Low Percentage of Students in Two-Year Institutions

According to the Fiscal Analyst study, The National Center for Education Statistics reported that in the fall of 1993 Montana enrolled approximately 12 percent of its postsecondary students in two-year institutions. This ranking placed Montana at nearly the lowest level nationally. The median ranking state was South Carolina with 40% and the highest ranking state was California with 70% of students attending two-year institutions. In Montana the percentage has increased since 1993 to more than 14% in 1994 and 1995. The report states that Montana's percentage in two-year institutions will increase further to 17% by 2001, still leaving Montana well below the national average.

The National Center for Education Statistics also reported, according to the Fiscal Analyst study, that associate degrees awarded in Montana in 1993 comprised 13.6% of all degrees awarded, while bachelor's degrees constituted 71.4%. The national averages were 23.8% and 53.8% respectively.

More In-State Job Placement for Technical College Grads

The Fiscal Analyst report indicates that most technical college graduates are placed in Montana but about one-third of four-year college graduates are employed out of state. The study makes the following observations regarding this data: 1) The Montana labor market could use more two-year graduates; and 2) The Montana labor market cannot assimilate all the four-year college graduates.

Montana Lacks Statewide Higher Education Data System Capabilities

An attachment to the Fiscal Analyst study shows that Montana is one of only nine states that has no multi-institutional database of student tracking information. This finding is stated in a report for State Higher Education Executive Officers (SHEEO), the national organization of higher education executive officers, titled *Findings from the 1995 SHEEO Survey on Statewide Data System Capabilities*. The report lists 32 states that have comprehensive statewide databases containing student records from four-year and

two-year public institutions. Nine other states have lesser levels of capabilities, while Montana is in a group with no such database.

The comprehensive SHEEO database, among other possibilities, gives postsecondary institutions the ability to:

- ✔ Undertake persistence/completion/time to degree studies.
- ✔ Do student transfer studies.
- ✔ Do studies on minority students.
- ✔ Make enrollment projections.
- ✔ Create K-12 feedback reports.
- ✔ Do remedial education studies.
- ✔ Make accountability reports.
- ✔ Accomplish financial aid studies.
- ✔ Do vocational-technical reporting.
- ✔ Exchange data with postsecondary agencies in other states.
- ✔ Exchange data with state departments of education (K-12).
- ✔ Share data with employment and training departments and programs.

5

Strengthening Vocational Education

The Winds of Change

Frequently at center stage in today's debate on educational change is the economy. Vocational education, by its very nature, is a major contributor to the economy. Vocational educators are extremely committed to helping their students obtain the technical skills needed to survive in the world of work. These same vocational educators are just as committed to developing the mind and spirit of their students and supporting students in their efforts to achieve the highest self worth possible.

Vocational education is undergoing change at all levels in Montana. Change is a natural and unavoidable event. Ultimately, meaningful change occurs as educators work with students. However, there must be a workable framework within which necessary and productive change transpires. This framework includes both the public and private sectors working together for the common good.

Vocational education is strong, but it can and must be strengthened in Montana. Candid suggestions for making that happen are given in this section. Chapter 6 will present overall recommendations based on these suggestions and other findings of this study.

Secondary Vocational Education

MCVE Survey Suggestions for Strengthening High School Vocational Education

The MCVE survey of May/June 1995 asked secondary responders to make *suggestions or recommendations for strengthening secondary vocational education in Montana.* Suggestions from educators who completed the survey follow.

Funding

- A stable and equitable funding system for secondary vocational education should be developed and implemented.
- Funding for high school, middle school and vocational guidance needs to be expanded.
- Funding for technology equipment must be a priority for vocational education.
- Vocational educators must work together to pursue better funding.

Image of Vocational Eduoation

- The image of vocational education must be improved. Vocational education is important for students of all abilities.
- More publicity about the qualities of vocational education is needed.

Leadership

- The Office of Public Instruction must be well-staffed and adequately funded to provide key leadership for vocational education.
- Local school boards need to be given more incentive to foster vocational education growth.
- Travel and supply budgets for state OPI specialists should be increased so there is more opportunity for interaction with instructors.
- There is need for coordination among state and local education agencies, businesses, and the community.
- Vocational education needs visible, connected leadership.

Curriculum

- There should be more emphasis placed on economics in the curriculum.
- Schools must get off the college prep track.
- Academia must recognize and integrate vocational skills. Interdisciplinary education is a must.
- Programs such as Applied Science should be made standard in Montana schools.
- The number of required vo-ed credits that students must take should be increased.

- Increased in-service training for vocational education teachers is needed.
- School-to-Work is good but it must carry academic credit.
- Vocational student organizations (VSO's) should be promoted vigorously.
- Schools need to provide students with professional qualities essential in the marketplace.

Change

- Society needs to realize that vocational education is as important as reading and writing.
- Many businesses are willing to help. We only need to ask to implement one more new idea.
- In Montana many good reform efforts are being addressed. However, we need evaluations of those efforts and leadership at the state level to guarantee consistency throughout the programs.
- Vo-ed can answer a lot of today's problems or concerns in education. Other disciplines need to listen and learn from vocational education.
- With all the talk about School-to-Work and Tech Prep, etc., vocational education needs to stand tall and not lose sight of its original intent and purpose.

Other Comments

- Schools need to positively and loudly market job opportunities for the future.
- The 20-year cycle is completed and the return to the need for a strong, educated workforce is now more than ever present.
- Vocational education offers students skills that they will use throughout their lives in every occupation. In addition to classroom learning, students need to be encouraged to be active in vocational student organizations to further their leadership, citizenship, academic, and technical skills.
- The Montana Council on Vocational Education is to be congratulated for playing a very pro-active role in the development and preservation of all vocational programs in Montana.

Postsecondary Vocational-Technical Education

MCVE Survey Suggestions for Strengthening Postsecondary Vocational-Technical Education

The MCVE survey of May/June 1995 asked postsecondary responders to make *suggestions or recommendations for strengthening postsecondary vocational-technical education in Montana.* Suggestions from educators who completed the survey follow.

Image of Vocational-Technical Education

- The image of high school students toward postsecondary technical education needs to be changed. Vocational-technical education is still seen by many as a second choice.
- Better counseling is needed beginning in middle school regarding the value and opportunities in obtaining two-year credentials.
- We need to move away from the social bias against the term *vocational.*
- There needs to be more emphasis in the high schools that technical schools are a choice, not an alternative.
- There needs to be stronger recruitment of students, diverting higher education focus to vocational programs rather than bachelor degrees.
- We need to get high school students to recognize careers in blue-collar industries.

Funding

- There should be a pool of money available from the state to do specific training for new businesses.

Leadership

- Programs should be coordinated to dovetail and not duplicate.
- There should be some kind of on-going mechanism for colleges of technology to communicate on a regular basis.
- Continued staff development is important.
- Coordinate, fund, and market the value of a trained workforce.
- Better coordination of the colleges of technology as a state system is needed.
- What is needed most is information. Perhaps the information is there, but we need to know how to get it and then pursue a coordinated and integrated approach of making it work for us.
- A statewide meeting/discussion of public and tribal community colleges and technical college leaders is needed.

Programs

- Postsecondary vocational-technical education must be flexible to meet the needs of employers and students.
- Advisory committees are very important and they must be heard.
- Continued cooperation with Tech Prep efforts is needed.
- There should be more business/industry/government/secondary/postsecondary partnerships.
- More telecommunications and distance learning is needed.
- More short-term re-training and update programs which meet local and temporary employer needs should be utilized.
- Tech Prep and School-to-Work should be expanded.
- More partnerships with business for long-term and short-term training should be initiated.
- Postsecondary vocational-technical education must be visionary and accessible to the public for program delivery. It must be done wherever and whenever needed.

Mission

- The mission of the colleges of technology is changing and has broadened. The strength of job training must be maintained, but we need to offer transferability and a transitional setting. This will save students money and help the overcrowded four-year colleges.
- Re-training of skills is important, but postsecondary institutions also need to work on student self-esteem, work ethic, honesty, and business/professional demeanor.

Costs

- Costs must be realistic and contained for students.

Other Comments/Concerns

- A major concern for the future is the lack of certified vocational teachers at the high school level. Without a strong feeder program, postsecondary institutions will suffer.
- The exposure of postsecondary vocational-technical education under the Montana University System has been positive.

6

Summary and Recommendations

Summary

Montana is doing at least an adequate job of achieving a consistent, integrated, and coordinated approach among its vocational education, employment, and training programs directed toward meeting the perceived economic needs of the state as rated by the various entities involved in this study.

All levels of vocational education and JTPA delivery systems consider inadequate funding to be a major barrier to providing training to meet employer needs.

Montana has no official state economic development plan. The foundations of a plan have been undertaken, e.g., the Montana Futures Project, but to date such a plan has not been implemented. The need for more short and long-range plans developed jointly by education, business, industry, labor, and local/state government would be a big boost for vocational education and JTPA to better meet employer needs in Montana. Vocational education and JTPA programs have a significant impact on economic development in Montana. Education and job training programs want this to be recognized, and they want the importance of education and training as an essential element of economic development to be considered and supported by decision makers when policy is made.

Montana businesses have questions about the ability of Montana education and job training programs to provide qualified workers. The capability of education and training programs to react quickly and flexibly to meet short-term, long-term, and recurring employment needs is a common concern of both business and education/training entities. Vocational-technical education efforts are encouraging at moving toward more flexible programming and cutting through bureaucratic slowness in program adoption.

Vocational education is accessible to all populations at all levels in Montana. A wide variety of vocational programs, though not all programs that business feels are needed, are available in the high schools and at postsecondary institutions. School-to-Work and Tech Prep are being implemented and seem to be on the move. Vocational student organizations

are extremely viable and active in Montana. Approximately 80% of Montana high school students are taking vocational education courses during the 1995-96 school year.

In spite of all this, Montana has one of the lowest percentages of students attending two-year colleges in the nation. There is a feeling that vocational education gets less-than-equal treatment than "academic" education. The image of vocational-technical education as a program for second-class students is an enigma that continues to stymie many vocational educators at all levels in the state. The exposure of postsecondary vocational-technical education under the Montana University System seems to be a positive measure in confronting the image obstacle. The need for more coordinated and visible leadership of vocational education at all levels is of major concern to vocational educators in the state. There is definite need for a centralized and up-to-date student data collection system at both the secondary and postsecondary levels.

Recommendations

1. *Montana should initiate a workable official state plan for economic development.* Education and training should be major participants in economic development along with government, business, industry, and labor. The plan should make certain that vocational education and job training provide appropriate programs to further the goals of the plan. The plan should include specific short and long-range goals for education and training that is needed in the immediate future, within five years, and for projections ten years and beyond. Adequate funds should be set aside for the provision of special training for new businesses.

2. *Post-secondary vocational-technical institutions must provide and aggressively promote more flexible and quick-reacting programs to meet temporary short-term and recurring employer needs, as well as meeting long-term employer demands.* Postsecondary institutions should also consider providing training to areas that they do not presently serve.

3. *The Office of Public Instruction and the Office of the Commissioner of Higher Education should intensify efforts in promoting and marketing vocational-technical education in Montana.* Actions should include hiring additional vocational staff and taking appropriate steps to foster increased enrollment, particularly at the postsecondary level.

4. *The Office of Public Instruction and the Office of the Commissioner of Higher Education should implement a centralized statewide database collection and reporting system for tracking student data and information, educational programs, and labor market needs.* The system should be able to provide data on current enrollments, projections, completions, follow-up, job market and training needs, program descriptions and evaluations, special populations, and other functions relevant to planning, revising, and validating educational efforts.

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SURVEY OF SECONDARY VOCATIONAL PROGRAMS

The purpose of this survey is to assist the Montana Council on Vocational Education (MCVE): (1) determine the extent to which vocational education, employment, and training programs in Montana represent a consistent, integrated and coordinated approach to meeting the economic needs of the state, (2) recommend policies which would strengthen vocational education, and (3) report on the availability of vocational education activities in the state. MCVE is required to report and make recommendations on the above mandates by the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 under Public Law 101-392.

Your responses are important to MCVE and critical to the outcome of the report. Please complete and return this survey in the enclosed, stamped envelope by June 1, 1995. Use the back side of the survey if you need more room for any response. MCVE appreciates your time and effort. Thank you for your assistance.

School_____

1. From your perspective, what is the role of secondary vocational education in the economic development of Montana? Note: For purposes of this study, *economic development* means *the development of human, natural and industrial resources which contribute to social and economic prosperity.*

2. How can secondary vocational training programs. . .
   (a) Better serve employment and training needs in Montana?

   (b) Contribute more effectively to economic development? [See #1 for definition of economic development.]

3. What barriers have you experienced in providing training to meet employer needs?

4. What specific new vocational programs, if any, should be initiated to more effectively meet employment needs in Montana or to better prepare students for the work force?

5. What strategies have you utilized to involve employers in the design, development or implementation of the vocational programs at your school? (Check all that apply)

- ☐ Advisory councils
- ☐ Co-op work programs
- ☐ School-business partnerships
- ☐ Business tours
- ☐ School-to-Work
- ☐ Student job exploration or internships
- ☐ Equipment donations from businesses
- ☐ Customized training for businesses
- ☐ Tech Prep
- ☐ Other (specify)_____

6. In program planning or curriculum modification, what sources do you rely most heavily upon to obtain information as to the economic, employment and training needs in Montana?

- ☐ MT Department of Labor statistics
- ☐ Needs assessments
- ☐ U.S. Department of Labor statistics
- ☐ MT Department of Commerce information
- ☐ Economic development councils or boards
- ☐ Chamber of Commerce information
- ☐ Local businesses
- ☐ Other_____
  _____
  _____

7. What additional resources would help your school better meet employer needs in Montana?

- ☐ Additional facilities
- ☐ Availability of data regarding worker supply and demand
- ☐ Increased or better communication among private and governmental entities
- ☐ Additional funding
- ☐ Short and long-range plans developed by education, business, industry, labor and local/state govt.
- ☐ Other_____
  _____

8. What are the limitations as to the availability of your programs to students?

- ☐ None
- ☐ Lack of facilities
- ☐ Limited class sizes
- ☐ Accessibility for special populations
- ☐ Other_____

9. Rate the impact you feel your school or program has had on Montana's economic development over the last five years. [See #1 for definition of economic development.]

☐ High ☐ Moderate ☐ Low

Please give two examples: [Use back if necessary.]

(1)_____

(2)_____

10. What policies or initiatives are needed in Montana to improve economic development as defined in question #1?

11. From your perspective, how do you rate the extent to which vocational education, employment, and training programs in Montana represent a consistent, integrated and coordinated approach to meeting the economic needs of the state? [5 is *high*, 1 is *low*] ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1

12. What suggestions or recommendations do you have for strengthening secondary vocational education in Montana?

13. Please add any other comments you feel appropriate to this study.

Please provide the name of the person completing this survey:

Name_____

THANK YOU FOR YOUR HELP! PLEASE RETURN BY JUNE 1, 1995

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SURVEY OF POST-SECONDARY VOCATIONAL TECHNICAL INSTITUTIONS

The purpose of this survey is to assist the Montana Council on Vocational Education (MVCE): (1) determine the extent to which vocational technical education, employment, and training programs in Montana represent a consistent, integrated and coordinated approach to meeting the economic needs of the state, (2) recommend policies which would strengthen vocational technical education, and (3) report on the availability of vocational technical education activities in the state. MCVE is required to report and make recommendations on the above mandates by the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 under Public Law 101-392.

Your responses are important to MCVE and critical to the outcome of the report. Please complete and return this survey in the enclosed, stamped envelope by June 1, 1995. Use the back side of the survey if you need more room for any response. MCVE appreciates your time and effort. Thank you for your assistance.

Institution_____

1. What is the placement rate for students *completing* programs at your institution?

	1992-93	1993-94
% placed in employment in-state related to their training	%	%
% placed in employment out-of state related to their training	%	%
% placed in employment in-state not related to their training	%	%
% placed in employment out-of-state not related to their training	%	%
% pursuing further study or training	%	%
% other	%	%

2. From your perspective, what is the role of post-secondary vocational technical education in the economic development of Montana? Note: For purposes of this survey, *economic development* means *the development of human, natural and industrial resources which contribute to social and economic prosperity.*

3. How can post-secondary vocational technical training programs. . .
   (a) Better serve employment and training needs in Montana?

   (b) Contribute more effectively to economic development? [See #2 for definition of economic development.]

4. What barriers have you experienced in providing training to meet employer needs?

5. What specific new training programs, if any, should be initiated to more effectively meet employer needs within your service area or within the state?

6. What strategies have you utilized to involve employers in the design, development or implementation of the vocational technical programs at your institution? (Check all that apply)

- ☐ Advisory councils
- ☐ Co-op work programs
- ☐ On-the-job training
- ☐ School-business partnerships
- ☐ Tech Prep
- ☐ Business tours
- ☐ Student internships
- ☐ Equipment donations from businesses
- ☐ Customized training for businesses
- ☐ Other (specify)_____

7. In program planning or curriculum modification, what sources do you rely most heavily upon to obtain information as to the economic, employment and training needs in Montana?

- ☐ MT Department of Labor statistics
- ☐ Needs assessments
- ☐ U.S. Department of Labor statistics
- ☐ MT Department of Commerce information
- ☐ Economic development councils or boards
- ☐ Chamber of Commerce information
- ☐ Local businesses
- ☐ Other_____

8. What additional resources would help your institution better meet employer needs in Montana?

- ☐ Additional facilities
- ☐ Availability of data regarding worker supply and demand
- ☐ Increased or better communication among private and governmental entities
- ☐ Additional funding
- ☐ Short and long-range plans developed by education, business, industry, labor and local/state govt
- ☐ Other_____

9. What are the limitations as to the availability of your programs to the public?

☐ None
☐ Lack of facilities
☐ Other_____
☐ Limited class sizes
☐ Accessibility for special populations

10. Rate the impact you feel your institution or program has had on Montana's economic development over the last five years. [See #2 for definition of economic development.]

☐ High ☐ Moderate ☐ Low

Please give two examples: [Use back if necessary.]

(1)_____

(2)_____

11. What policies or initiatives are needed in Montana to improve economic development as defined in question #2?

12. From your perspective, how do you rate the extent to which vocational technical education, employment, and training programs in Montana represent a consistent, integrated and coordinated approach to meeting the economic needs of the state? [5 is *high*, 1 is *low*] ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1

13. What suggestions or recommendations do you have for strengthening post-secondary vocational technical education in Montana?

14. Please add any other comments or suggestions you feel appropriate to this study.

Please provide the name of the person completing this survey:

Name_____

THANK YOU FOR YOUR HELP! PLEASE RETURN BY JUNE 1, 1995

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SURVEY OF JOB TRAINING PARTNERSHIP ACT DELIVERY SYSTEMS

The purpose of this survey is to assist the Montana Council on Vocational Education (MCVE) determine the extent to which vocational-technical education, employment, and training programs in Montana represent a consistent, integrated and coordinated approach to meeting the economic needs of the state. MCVE is required to report and make recommendations on the above mandate by the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 under Public Law 101-392.

Your responses are important to MCVE and critical to the outcome of the report. Please complete and return this survey in the enclosed, stamped envelope by June 1, 1995. Use the back side of the survey if you need more room for any response. MCVE appreciates your time and effort. Thank you for your assistance.

What is your affiliation with JTPA?

- ☐ Program operator
- ☐ Private Industry Council
- ☐ Administrative entity
- ☐ Job Service
- ☐ Other (specify)_____

1. What is the role of the JTPA delivery system in Montana economic development? Note: For purposes of this study, *economic development* means *the development of human, natural and industrial resources which contribute to social and economic prosperity.*

2. What suggestions or recommendations do you have for strengthening the role and function of JTPA in worker training and economic development?

3. What barriers have you experienced in providing training for JTPA-eligible recipients to meet employer needs?

4. What strategies have been utilized to involve employers in the design, development or implementation of the JTPA program(s) with which you are involved?

5. In program planning, what sources do you rely most heavily upon to obtain information as to the economic, employment and training needs in Montana?

- ☐ MT Department of Labor statistics
- ☐ Needs assessments
- ☐ U.S. Department of Labor statistics
- ☐ MT Department of Commerce information
- ☐ Economic development councils or boards
- ☐ Chamber of Commerce information
- ☐ Local businesses
- ☐ Other_____

6. What additional resources would help JTPA better meet employer needs in Montana?

- ☐ Additional facilities
- ☐ Availability of data regarding worker supply and demand
- ☐ Increased or better communication among private and governmental entities
- ☐ Additional funding
- ☐ Short and long-range plans developed by education, business, industry, labor and local/state govt.
- ☐ Other_____

7. Are there any limitations as to the availability of your delivery system to eligible recipients?

8. Rate the impact you feel your delivery system has had on Montana's economic development over the last five years. [See #1 for definition of economic development.]

☐ High ☐ Moderate ☐ Low

Please give two examples: [Use back if necessary.]

(1)_____

(2)_____

9. What policies or initiatives are needed in Montana to improve economic development as defined in question #1?

10. What is the placement rate for students *completing* your program (program operators only)?

	1992-93	1993-94
% placed in employment in-state related to their training	%	%
% placed in employment out-of state related to their training	%	%
% placed in employment in-state not related to their training	%	%
% placed in employment out-of-state not related to their training	%	%
% pursuing further study or training	%	%
% other	%	%

11. From your perspective, how do you rate the extent to which vocational education, employment, and training programs in Montana represent a consistent, integrated and coordinated approach to meeting the economic needs of the state? [5 is *high*, 1 is *low*] ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1

12. Please add any other comments you feel appropriate to this study.

(Optional) Please provide the name and address of the person completing this survey:

Name_____

Address_____

_____

THANK YOU FOR YOUR HELP! PLEASE RETURN BY JUNE 1, 1995

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